

PENDING NUCLEAR LEGISLATION

Y 4.P 96/10: S. HRG. 103-218

HEARING

Pending Nuclear Legislation, S. Hrg. BEFORE THE

COMMITTEE ON
CLEAN AIR AND NUCLEAR REGULATION
OF THE

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

S. 1162

A BILL TO AUTHORIZE APPROPRIATIONS FOR THE NUCLEAR REGULATORY COMMISSION FOR FISCAL YEARS 1994 AND 1995, AND FOR OTHER PURPOSES;

S. 1165

A BILL TO PROVIDE FOR JUDICIAL REVIEW OF NUCLEAR REGULATORY COMMISSION DECISIONS ON PETITIONS FOR ENFORCEMENT ACTIONS, AND FOR OTHER PURPOSES; AND

S. 1166

A BILL TO AMEND THE ENERGY REORGANIZATION ACT OF 1974 AND THE ATOMIC ENERGY ACT OF 1954 TO ENHANCE THE SAFETY AND SECURITY OF NUCLEAR POWER FACILITIES, AND FOR OTHER PURPOSES

JUNE 30, 1993

Printed for the use of the Committee on Environment and Public Works



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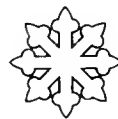
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PENDING NUCLEAR LEGISLATION

WEDNESDAY, JUNE 30, 1993

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON CLEAN AIR AND NUCLEAR REGULATION,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m. in room 406, Dirksen Senate Office Building, Hon. Joseph I. Lieberman [chairman of the subcommittee] presiding.

Present: Senators Lieberman, Faircloth and Kempthorne.

OPENING STATEMENT OF HON. JOSEPH I. LIEBERMAN, U.S. SENATOR FROM THE STATE OF CONNECTICUT

Senator LIEBERMAN. The hearing will come to order. Good morning and welcome.

Today this Subcommittee is conducting a hearing on the Nuclear Regulatory Commission's proposed authorization bill for fiscal year 1994 and fiscal year 1995, as well as related legislative proposals.

The NRC will testify today about some of its proposed amendments to the Atomic Energy Act which seek to clarify and, in some cases, expand certain enforcement authorities.

One of the other proposals we will take testimony on today is a bill that Senator Baucus and I have introduced that would provide a right to request the NRC to address significant safety issues. It would also provide for judicial review of NRC decisions not to take any action in response to such requests.

The Congress has not enacted an authorization bill for the NRC since 1984 and I hope that we can revive the authorization process in this Congress because it provides an excellent opportunity for members of this Subcommittee, the full Committee on Environment and Public Works, the Congress, and indeed the public, to review the major regulatory issues facing the NRC, and for us in Congress to provide guidance on these issues. It also enables the Congress to fine tune the Atomic Energy Act which, of course, is the governing statute for the NRC.

The major issues facing the NRC are evolving as the nuclear industry itself evolves. Only four new plants are still in the licensing process. Nuclear powerplants in this Country are all getting older and none are being built to replace them. As nuclear plants age, the NRC must deal with issues such as the degradation of nuclear equipment, license renewal, decommissioning, and decontamination. These are not easy issues and I want to review whether the NRC has the resources to address them and whether the public

health, safety, and environment will be protected as part of that process.

Additionally, in a different area, last March at a hearing before this Subcommittee it became clear—to me, at least—that the current NRC regulations are inadequate to protect nuclear powerplants against terrorists using vehicles to carry explosives into a powerplant. At that time, I urged the NRC to strengthen its requirements and the NRC agreed to undertake a review. Now, the NRC staff has proposed to the Commission that the regulations be amended to require additional protections. I'd like to hear more details about those proposals today. Obviously, in this climate—heightened since the hearing in March—we must do everything we can to assure that we're protecting ourselves from terrorists.

I've also asked our witnesses to comment specifically on that legislation which Senator Baucus and I have introduced allowing for judicial review in the United States Court of Appeals of a decision by the NRC to deny a request by a citizen to take enforcement action on a significant safety issue. I'm particularly interested in comments on whether the standard in the bill strikes the appropriate balance between, on the one hand, ensuring that the NRC considers and responds to significant safety issues raised by members of the public and, on the other hand, avoiding unnecessary proceedings and litigation over issues which are not significant.

Senator Baucus and I introduced this bill because of complaints that there is an imbalance between the public's ability to participate in the Atomic Energy Act and the public's ability to participate in the enforcement of our other environmental laws. The Clean Water Act, the Clean Air Act, the Safe Drinking Water Act, the Superfund law, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act all have citizen suit provisions. In a citizen suit under specified circumstances, a person can sue a Federal agency or a private entity regulated under the statute, in order to bring that entity into compliance with the statute, regulations, or permit terms, and for penalties for noncompliance with the law.

The Atomic Energy Act has no such citizen suit provision and I suppose that's not surprising because the Act was enacted in 1954, long before there was thought of citizen suits and environmental laws. But, those actions did become commonplace starting in the 1970's and they are now a well established and important part of our system of environmental enforcement. Citizen suits provide a supplement to governmental action to ensure that the laws are adequately enforced. I remember from my time as Attorney General of Connecticut that we considered those who were filing citizen suits to be allies—in fact, we called them “private Attorneys General”.

The bill we have introduced, Senator Baucus and I, is a targeted approach. While enforcement lawsuits are not allowed by citizens against a nuclear powerplant operator or other facility licensed by the NRC, the bill would allow persons to petition the NRC to bring such an action, and judicial review of the agency's decision of denial of such a petition.

We introduced the bill to see if we can update the Atomic Energy Act in this respect. I hope our witnesses will focus on that question.

Unfortunately, the nuclear industry will not be testifying today. As I understand it, no Chief Executive Officer of a utility was available on this occasion, which I regret, but I will certainly review and welcome any written comments submitted by representatives of the industry.

I welcome Chairman Selin and the members of the Commission. I have been informed that this is Commissioner Curtiss' last day as a member of the Commission. We thank him for his service and wish him well. This Committee has a certain paternalistic pride in his ongoing involvement in this area and we wish him well in the next chapter.

Chairman Selin, it's all yours.

STATEMENT OF HON. IVAN SELIN, CHAIRMAN, NUCLEAR REGULATORY COMMISSION ACCOMPANIED BY, HON. KENNETH C. ROGERS, MEMBER; HON. JAMES R. CURTISS, MEMBER; HON. FORREST J. REMICK, MEMBER; AND HON. E. GAIL DE PLANQUE, MEMBER

Mr. SELIN. Thank you very much, Mr. Chairman.

The NRC welcomes your initiative to revive the authorization process. We think, as you said, that it will be a very useful vehicle both for airing issues and for getting more concrete guidance from the legislature. We also appreciate your interest and support for our authorization and legislative proposals and look forward to working with you as they progress through Congress. As you requested in your letter of invitation and in your opening remarks, we have provided written comments and I will comment orally on S.1165, the Nuclear Enforcement Accountability Act of 1993.

Before describing our budget, we would like to provide an overall perspective on our principal programs and explain how we are using our resources to fulfill our statutory mission.

First of all, about 55 percent of our budget request is directed to the conduct of our regulatory program for commercial nuclear reactors. The 109 reactors currently licensed to operate in the United States generate about 21 percent of the Nation's electricity. Over the past several years, as these performance indicator charts show, the operational safety performance of U.S. powerplants has continued to improve. In general, the better performers appear to have reached plateaus where current performance levels are close to reasonable expectations, but it's the poorer reactors who lag behind—in some cases, significantly behind—in performance. The implication of this is that it appears that the best way for us to work with the industry to reduce overall reactor risk is to concentrate our efforts on the poorer performers, to bring them up to the levels already reached by the better performers. A large amount of our effort is going to improving performance measures plant by plant to make sure that we can target the resources where the risk probability calls for it.

Turning to security as you, Mr. Chairman, discussed in your opening statement, you are aware that the present threat state-

ment does not address the use of a vehicle or a vehicle bomb against a nuclear reactor. On June 24, the staff recommended that expedited rule making be undertaken to modify the design basis threat to include protection against malevolent use of vehicles at nuclear reactors. To summarize slightly, the three key points in this recommendation were: that the design basis threat itself be modified to include a land vehicle for the transport of personnel or explosives; that the appropriate rule, which is 10 CFR part 73, paragraph 55, be changed to reflect the change in the design basis threat and to allow alternative security measures when establishing stand-off distances; and to undertake expedited rule making to implement these changes, allowing at least 30 days for public comment, which seems to us to be a fair compromise between making sure that the public has a formal chance to comment on the rule changes and providing time so that we can quickly make the changes. The Commission has approved the staff's recommendations.

The older nuclear powerplants operating in this Country are facing expiration of their original 40-year operating licenses and one of the key issues for industry is to know the NRC's requirements for license renewal up front, in order that industry can make reasonable determinations regarding whether they should go for license renewal or if they should go for some other way to obtain replacement power.

Our staff has developed a process for implementing the license renewal rule, which focuses on the effective management of aging during the renewal term, but takes full advantage of existing maintenance programs. In other words, in most cases the kind of aging we're worried about in the last 20 years is similar to the aging that occurs in the first 40 years and if there were effective programs the first 40 years, we expect to give very high weight to these programs. However, this process represents an approach to implementation which was not expressly addressed at the time that the rule was promulgated, so the Commission has made available to the public several papers detailing the staff's proposed implementation approach and some views as to what changes in the rule have to be made or might have to be made in order to effect these changes. We'll soon schedule a key workshop with all concerned parties as a prelude to establishing the clear regulatory recommendations.

As far as the future reactors go, as you well know, we've established a process to review future nuclear reactor designs in order to make it possible, on the one hand, to resolve safety and environmental issues before rather than after the start of nuclear power construction and, furthermore, address design safety issues generically.

We've received four design certifications applications under this new process. The first two applications are for evolutionary versions of existing light water reactor designs. The NRC staff has completed draft safety evaluation reports on both of these evolutionary designs. There are a number of open issues which we and the vendors are working to resolve, but almost all of these open issues deal with the new concept of acceptance criteria, so we would know before construction began what it would take to satisfy the Commission that the designs were properly implemented.

There were very few questions with the designs themselves. As far as the other two applications for novel light water reactor designs—the so-called passive reactors—an initial review of each of the two has begun.

Coming back to our budget, our budget continues to provide tight but adequate resources to develop the independent information and analyses necessary to support our safety decisions on these new and unique designs.

Turning to the material area, about 15 percent of our budget request is devoted to ensuring the safe disposal of nuclear waste and the safe use and transport of nuclear materials. We've asked for a small increase in this program, primarily to implement NRC's new responsibilities for certifying the gaseous diffusion uranium enrichment plants to be operated by the United States Enrichment Corporation. Up until now, those costs have been borne within our overall base and spread to other licensees, but starting July 1, the United States Enrichment Corporation will be billed for these directly services.

One important topic, as you pointed out, sir, was the decommissioning of sites. It's obvious that we must be able to ensure that once an operating facility completes its useful life that the site will be properly cleaned up. Thus, decommissioning and decontamination are an integral part of our licensing process. I believe that recently, basically in the last year, that we have become quite effective in communicating to licensees and the public our expectations for timely and effective remediation of sites.

One part of this process is to set some standards in advance so that people will know to what degree they have to remediate the sites in order to return them to general use. We are conducting an enhanced participatory rule making to establish these standards. This novel rule making includes workshops around the country in which NRC, EPA, industry, and grass roots environmental groups have come to the same table and have had what I think all participants have considered so far to be fruitful discussions of the difficult issues associated with setting these standards.

Moving to the medical program—this is one of the most important uses of by-product material—that is, the use of by-product material for medical diagnosis and medical therapy. Our program is directed toward assuring that in addition to worker and public safety that the patient will receive the dose of radiation or radioactive material that is prescribed by the physician. This is a big and complicated program that causes us many headaches, to be frank. As we look at the program and the improvements that have been implemented, I would like to note that the NRC's jurisdiction covers, at the most, 25 percent of radiation therapy treatment—that the vast majority of people who need radiation therapy receive these from devices that don't use radioactive isotopes and are not subject to our regulation.

It's fair to ask if it really makes sense to continue the existing scheme where we put a large amount of our limited resources into a relatively small part of the therapy area, and if this is the best way to achieve the goal of protection of the public. So, we've been giving some thought to ways to address these issues.

In this regard, we've created a task force to examine, among other questions, the proper allocation of responsibility among Federal and State regulatory bodies. We plan to provide the Congress with an interim report on our efforts to come to grips with these issues by August 6. This report will basically lay out the options and the information that is needed—it will not come to a conclusion as to what ought to be done. The NRC is only a small part of this, so even if we decided that a different level of jurisdiction is called for, that would be the beginning of a long process to rectify the situation.

Turning to management support, about 30 percent of our budget is involved in the day-to-day management of the agency—house-keeping, and some rather novel programs. Even in this area, we have assumed significant new responsibilities which are putting greater pressure on our available resources. For instance, the NRC participates in a number of international nuclear safety and safeguards activities, of which the most notable deal with the former Soviet Union, following up on the Lisbon, Munich, and Vancouver meetings.

In addition to nuclear powerplant safety, there are health and environmental challenges and other potential targets for future aid in the area of radiological health and safety in the former Soviet Union. The NRC is playing what I think is an important role in the development of a much needed integrated plan for overall assistance there.

At the same time, we are witnessing the growth of commercial nuclear power in Asian nations such as Japan, Taiwan, and South Korea, where U.S. vendors are competing actively for reactor sales. We're seeing the beginning of a new program in Indonesia. The NRC has technical information exchange agreements with 27 different countries, including these. Most recently, we have concluded an agreement with Indonesia and renewed an existing agreement with China. These agreements are primarily to help foreign nuclear regulatory organizations to create a regulatory environment similar to the one that we have here in the United States.

The point that you alluded to indirectly, sir, is the need for openness and credibility in all of our activities. Here we feel that the NRC has made great strides in keeping the public informed about what we are doing and why we are doing it, of our successes and shortcomings, not only in the industry but in our own NRC operation. We have solicited the participation of the public in many areas and have benefited from their contributions. As indicated earlier, the NRC currently has an enhanced participatory rule making effort under way to establish radiological criteria for decommissioned material sites. We have scheduled a workshop next month to deal with the 2,206 petitions. We're opening some enforcement conferences to the public, we conduct open meetings to discuss each licensee's performance assessment, and regional administrators now hold quarterly briefings for the public and the media. Perhaps even more amazing is that we're starting to look forward to these instead of dreading them.

We now come, sir, to the question of legislative proposals. We appreciate your interest and the committee's interest in our seven legislative recommendations. The written statement describes each

of the seven. The one on which most questions have arisen and which I'll just touch on briefly is our requested amendment to the Atomic Energy Act, which would permit the NRC to obtain a judicially approved administrative search warrant to inspect the premises of a nonlicensee who is a supplier to the regulated nuclear industry. Requiring the use of a subpoena process, as we now have to do, poses a high risk of destruction of evidence, since notice and opportunity to contest the subpoena must be given. The administrative search warrant authority is needed to ensure that suppliers to NRC licensees will not be able to deny agency investigators access to important information.

Mr. Chairman, in your invitation and in your statement, you asked the Commission's views on S.1165, the bill which you co-sponsored with Senator Baucus to deal with judicial review of enforcement decisions and the 2.206 petitions. We have read your remarks in the Congressional Record and applaud the open-minded approach that you took both in the record and in your statement introducing the bill—the way to kick off meaningful debate on not just the question of the legislation itself but increase the citizen participation in the safety process. We agree with the importance of 2.206 enforcement petitions. As I mentioned, we have scheduled a workshop on July 28 to see how we can make the process more effective and, most importantly, more credible. We think this process provides opportunities to involve citizens. It's clear that even though we think it works quite well from the health and safety point of view, it doesn't accomplish its other objectives. But, frankly, we don't think legislation is likely to produce significant effects, although it will produce significant costs.

As you noted, in *Heckler v. Chaney*, the Supreme Court clearly stated its belief that regulatory agencies are due deference in exercising their enforcement discretion, absent abdication of responsibility on the agency's part. The Commission's treatment of 2.206 petitions merits that deference. The staff's decisions are carefully reasoned and carefully justified—in fact, they're quite extensively documented. They at times act on the petitioner's request, not only granting some percentage of the request, but taking independent actions that are consistent with the objectives of the petition. To be very frank about it, the Commission review of a staff decision is absolutely not a rubber stamp, thus assuring that staff decisions are entered into reasonably and carefully. Before the Supreme Court decision in *Heckler*, the Commission was never reversed in the ten or so requests for judicial review. Besides, there is both the care with which petitions are treated and the unlikelihood that returning to judicial review would, in fact, ever lead to a different safety outcome.

It's from this record as much as our evaluation of our own performance that we believe that the net effect of the bill would be to incur costs without any substantive difference in outcomes. In your remarks, you discussed at some length the role of citizen suits, the absence of citizen suits in the area of atomic energy and, therefore, the need to level the playing field. You might expect that our view of the history is a little bit different—we don't think that the absence of suits was because the Atomic Energy Act is old; it's been amended many times—we think that this admittedly exceptional

situation where citizens cannot directly sue NRC-licensed companies for safety is more than balanced by the equally exceptional degree of inspection that the NRC performs on its licensees. We view citizen suits as a second-best attempt to make up for the sparseness of inspection by other agencies. The bargain that Congress has implicitly—and, in fact, almost explicitly made—was to provide a pervasively regulated area in atomic energy for atomic energy licensees in return for freeing the licensees from citizen and judicial regulation.

In short, the net affect, Mr. Chairman, of your and Senator Baucus's bill would be to single out NRC for exclusion from the coverage of *Heckler v. Chaney*. We don't think our record calls for such special treatment, and therefore we must respectfully oppose the bill.

You specifically asked about the standards and before I comment on that I'd like to say that the standard in your bill is not the kind of standard that's in *Heckler v. Chaney*. When they say a bill is not reviewable unless there is an objective standard—they're talking about procedural standards, so the judges can take a look to see if the agency has carried out its own procedures. The standard that you have set out in your draft is the substantive standard—it says here are the kinds of things, from a safety point of view, that should be looked at. We have no problem with the standards that you've set out. On a more technical nature, we would not like the review ability to just be able to say that the petition should be granted because in many cases petitions ask for remedies that are far in excess of the problem at hand. So, even if there were review ability, that bill should just call for the NRC to have the hearing, not necessarily to grant the remedy. That's a small technical point.

In summary, we understand the reason for the bill. We think that we did operate for years in an area of judicial review ability and there were very few cases taken to court. We don't think there would be a practical impact in the sense of more 2,206 petitions being found valid and there would be somewhat of an increase in costs just to handle the review points.

Turning to our FY 1994–1995 authorization, our fiscal year 1994 budget request is for \$547.7 million—an increase of only \$7.7 million above the fiscal year 1993 figure—less than a two percent increase. Our FY 1995 budget is less than a one percent increase over our request for FY 1994. The reason for these small increases is that well before submitting our requests to OMB, we undertook an aggressive, thorough review of our programs and produced a streamlined budget request at less than the rate of inflation, even as we undertake additional responsibilities. So, we really are trying to do a little bit more with a little bit less, in real terms. We're budgeting increased resources to keep pace with industry activities associated with reactor license renewal and the safety reviews associated with certifying new power reactor designs.

In addition, we have programmatic increases needed to fund some of our new responsibilities such as regulating the United States Enrichment Corporation's facilities as required by the Energy Policy Act. However, we found that by following the policy that I discussed earlier, we could make offsetting reductions in current operations and in reactor research without compromising our

safety responsibility. In short, we've tried to stay a step ahead of events and by so doing we think that we've been able to undertake additional responsibilities in the investment of those programs that affect the future while slightly reducing our budget in real terms. We will continue to do all of this in a transparent manner that facilitates public understanding of our regulatory process.

Mr. Chairman, this concludes my oral statement. My fellow Commissioners and I will be very pleased to answer the questions of the subcommittee.

Senator LIEBERMAN. Thank you, Chairman Selin. I presume that the other Commissioners have no opening statements to make at this time, and I appreciate your statement.

I welcome my colleague, Senator Kempthorne.

I'll begin with an opening round and then I'll be happy to turn it over to Senator Kempthorne.

Let me just comment briefly and say that I appreciate the effort of the staff in expanding the regulations regarding our fears about terrorism at nuclear plants. I appreciate very much that the Commission has accepted those recommendations and I think that they should give the public and those who work at nuclear powerplants an increased sense of security, so I thank you very much for that.

Let me begin with the whole question of judicial review of the denials of enforcement petitions. I appreciate the spirit in which you responded. My opening question here is whether there is a current standard for determining whether to grant a 2.206 petition?

Mr. SELIN. Not in the sense of *Heckler v. Chaney*. Regardless, we have substantive guidance to the staff and if you really want to summarize, what it comes down to one is looking at the petition to see if there is a compliance issue, a black and white statement that there is reason to believe that the licensee is not complying either with our regulations or the provisions of his license and then, I'll go even further and say that if you see a health and safety issue there, even beyond compliance, do something about it—that's the guidance that we've given to the staff. It's not a narrow, legalistic review of the petition—it goes beyond that—if the petition has raised an issue, even though the licensee may be in complete compliance with all the rules, if there is a risk involved, we follow up on the risk.

The standard that's set in *Heckler v. Chaney* has more to do with if the agency or statute has set up a set of procedures that are pretty clear that say that if you comply with the procedures, you must give the people a hearing, otherwise you do not. We don't have such a set of procedural standards. The effect of those standards is to change the judicial review from a substantive review to a procedural review. The deference that's given to these agencies is a substantive deference and, really, if you've read any of these 2.206 petitions and the answers, I think you'll be struck by how thorough they are, by how carefully researched they are, the relative timeliness. In no sense could they be read as abusing the deference that the courts offer.

Senator LIEBERMAN. So, although there's not a formal standard, you'd say that there's a set of guidelines, as you've suggested, that guides your consideration of 2.206 petitions?

Mr. SELIN. There's substantive guidelines to the staff in reviewing the 2.206 procedures. There are not procedural guidelines where they check these off and if you have more yeas than nays, you have to give the people a hearing. On the advice of counsel—I've read the opinion decisions myself and then I've consulted, of course, with our counsel—and it's pretty clear that the discussion of standards in *Heckler v. Chaney* are their procedural standards. In other words, can a judge look at these and not second-guess the agency in that the agency is not following its own procedures, therefore the court should step in.

Senator LIEBERMAN. So, are the standards that are there written or are they just generally understood in the agency? One of the questions, from a devil's advocate point of view, if there is no written standard, then how does the NRC know whether or not to grant the petition? That's a question that one might ask.

Mr. SELIN. There are some nonbinding documents, policy statements, et cetera, to which you may be referring. Let's say the question is one of health and safety—let's look at the health and safety questions. These range from a physician to a nuclear powerplant. It does not seem, to us, appropriate or necessary to have more concrete standards. But, that's exactly the kind of question that we intend to review with the general public at the end of July in our 2.206 enforcement conference.

Let me make this perfectly clear. We believe that it's very important that this process be more credible than it is today, to be perfectly frank about it. We think it's important that the public sees this as a real opportunity to participate in safety issues in regulation of existing powerplants. We've been given enormous authority and deference and we don't wish to abuse it, so there's no question that even though we think that from a pure health and safety point of view the process works pretty well, it's not achieving the credibility that it ought to be.

We can look back and see, at places, where we've run it informally in a way that should be formal. For instance, in the Yankee Rowe case, the Commission intervened to the point of saying, "We don't want to just work on paper—we want to get the people in, sit down at the table, and hear what they say." We don't have any internal rules for the director inviting in the parties—it's all done on paper. One of the questions that would be looked at in this 2.206 conference is, under certain circumstances, should the 2.206 process be opened up to allow what, in your language—not in our language, but in general language—is a hearing. Not cross examination and discovery, but people being able to trade views in front of the safety people.

Second is the area you brought up—some more formal guidance on how they should be treated. Those will be all on the table at our conference.

Senator LIEBERMAN. Will you consider the question of judicial review at that workshop?

Mr. SELIN. The guidelines do not exclude it, therefore if any of the participants want to bring it up, they can.

Senator LIEBERMAN. I want to read a sentence from *Heckler v. Chaney*.

Congress may limit an agency's exercise of enforcement power if it wishes, either by setting substantive priorities or by otherwise circumscribing an agency's power to discriminate among issues or cases it will pursue.

So, would the NRC object to the creation of a standard, either by regulation or legislation, for 2.206 petitions?

Mr. SELIN. The simple answer is yes, but I'd like to be allowed to elaborate on that a little bit.

Senator LIEBERMAN. Sure.

Mr. SELIN. Part of your argument was that there were no citizen suits and therefore the NRC should be subject to judicial review where other agencies are not. I tried to explain why we don't think that's valid. Citizen suits are offset by the pervasiveness of our regulations and inspections—in fact, are more than offset. So, our general principle is that we believe that we've done a good job with these petitions from a strict health and safety point of view. We don't see any reason that we should be singled out differently from other agencies with respect to Heckler. If the Congress decided to do something across the board, we certainly would expect to be included in that. We believe that the standard in your bill is, in fact, quite acceptable. It really is what we do anyway. We just don't think it's necessary. We don't object to the substantive standard, we just don't think it's necessary.

Senator LIEBERMAN. I gather that the standard in our bill is quite comparable to one that was applied by the NRC prior to *Heckler v. Chaney* in fact.

Mr. SELIN. It's still applied, but the idea that a court would look at an NRC decision and try to independently decide whether we had made a sound decision, from a health and safety point of view, is almost without precedent. We've looked at this—I can find two cases, both EPA cases, where courts have questioned the actual technical or substantive regime of a regulatory agency. It never questioned ours, so they're not standards of the language procedure—we, I believe are meticulous in that.

Senator LIEBERMAN. Just one or two quick, final questions in this area. I understand that there was a 1989 case in the first circuit which held that the NRC's denial of a 2.206 petition was reviewable, but according to a different standard—not the arbitrary and capricious standard—but subject to review only if the agency had "abdicated or inexcusably defaulted on its responsibility".

How is that working out in the first circuit? Am I rendering the case accurately and, if so, I'm curious how that's working out?

Mr. SELIN. You have stated it accurately, but the petition for review was finally denied because the court came to the conclusion that their power to review the decision is very limited. They basically said, "We could review this decision if we wanted to, in spite of *Heckler v. Chaney*, because it was a narrow procedural piece." We agree that our actions are reviewable, in the procedural sense, that somebody could try to review if the agency didn't follow its own procedures, but that's very different from being able to hold that they don't agree with the conclusion.

But, as the court said in reviewing the petition—essentially, they speculated and said, "We would exercise this very limited power only if the Commission was inexcusably defaulting." It's very strong language. They didn't say we did default on our responsibil-

ity, and they didn't say we didn't follow our procedures—they just said, “if that were the case,” and as I said, that's in *Heckler v. Chaney* as “absent abdication of responsibility.”

Senator LIEBERMAN. So, the standard there is so extreme that it hasn't really had much of an effect on the way you've done.

Mr. SELIN. That's the standard in the third sense—the first sense is the substantive procedure, the second is the internal procedures, and the third is a review of the result to be so out of line as to say that we're abdicating our responsibility and there's a burden of proof on that.

I just looked back at the history before *Heckler v. Chaney* and it's my belief that there were two questions. One is how did we do then and the answer is that we did very well, if you keep score. And the second is, is there reason to believe that since the Supreme Court decision came out, that our directors have become more cavalier in their opinions than they were before? In other words, would you get some kind of preemptive or deterrent effect by having this? I think the answer is clearly “no” to both questions—we can't see a difference in the quality. The Commission is, in effect, the review board of the staff and we are a lot tougher than any court would be on our staff. The quality is there. The law would not kill us or anything, I just don't see that it would really lead to any substantive improvement.

Senator LIEBERMAN. We should continue this dialog. This, like so many other things is a question of how you look at it—from which perspective. You've indicated that the NRC should not be the only agency whose enforcement discretion is reviewable. If you look at it from the point of view of the other environmental laws and the access to citizen suits, the NRC is the exception. I understand we're talking not quite about apples and oranges, but about different parts of the process.

Mr. SELIN. We have 100 percent presence on powerplants, we have 5 or 10 year renewal on licenses, so citizens have every opportunity, on material licenses, to participate in the process. I think the system is pretty good, but the big problem is that it's not credible enough and that's where we have to work on it.

Senator LIEBERMAN. OK. Well, I look forward to hearing about the workshop and continuing with this discussion. This is something that Senator Baucus and I are interested in.

Senator Kempthorne.

Senator KEMPTHORNE. Thank you, Mr. Chairman.

Chairman Selin, it's nice to see you again.

If Congress were successful in passing legislation which would make the 2,206 petitions judicially reviewable, what kind of resource implications would that have on the NRC?

Mr. SELIN. The only thing I can do is go back and see what happened before the case. Normally, we would have one or two cases come before a court. We need to do the same homework for the director's decision that we would to go to court, so the actual, basic research, we believe, to be frank, would be negligible. The difference would be to actually go to court, argue the cases, et cetera.

I haven't looked at these figures—the differences would not be large. We could live with the Act, if it were passed, except for the honor of being singled out from all other agencies. But, there

would be a small increase in resources with no measurable difference in health and safety.

Senator KEMPTHORNE. I appreciated your testimony, when we were talking about the security upgrading at the nuclear powerplants. Can you give us your best cost estimate for upgrading security at these individual powerplants?

Mr. SELIN. With your tolerance, I should explain a little more of what the decision was. The decision was that every powerplant that could do so without major changes, without moving out the fences or rebuilding the buildings to make them firmer, should go out and do what they can do.

There's a set of actions that are available. The estimates are that this will cost about \$1 million per powerplant, and they could range from \$.5 million to as much \$2.5 million to \$3 million in a very small number of cases. That would be required, regardless of the costs within that range. The average cost would be about \$1 million, and we're talking about 70 sites.

Now, on a very small number of sites, the staff estimated 10 percent—maybe even less than 10 percent—would find that because of their geometry, that's not enough; the current fences are too close to the buildings. In other words, we have a test that says that if you're more than a certain number of feet from the building, you don't even have to do any more calculations—you're off the hook. So, for this small number of plants, say 5, 6, 7, maybe 10 plants, they would have to do additional analysis to say that they're closer to the building than a stand-off could carry it, but given where their pipes run and given their buildings, they can convince the NRC that that's enough, and they'd be off the hook. Maybe 2, 3, or 4 of these plants couldn't do that and they would have to then come in and show that in order to comply they'd need to buy some more land, cross a public highway, restructure a building—then they would come in to us and try to convince us that the additional cost is just not worth it and we would do an analysis that we customarily do when we're talking about small improvements in safety versus small increases in cost.

So, we figure that about \$1 million would cover almost all of the plants. Maybe half a dozen would come in and say they need to do more but they don't think it's worth it. Then, some would be off the hook and some wouldn't, so a couple of guys might have to spend more than \$1 million.

Senator KEMPTHORNE. Now, you state that these would be requirements, but you also used the word "should"—will it be a mandate?

Mr. SELIN. They would be required to do the first piece, which is to reinforce their current fences to make them actually barriers and not merely trip wires that people would have to pass.

Whether they do more than that would depend on the additional cost and whether they could convince us that more than that was necessary or not.

Mr. REMICK. I wish to make a point of clarification. The Commission's decision was one to develop a proposed rule which would go out for public comment. What Chairman Selin is referring to is the Commission decision to develop a proposed rule for public comment.

Senator KEMPTHORNE. Thank you. I just received a call from a university that has been assessed a user fee for its small reactor. The user fee will absolutely wipe out the capital budget at this university for that program.

I understand that the assessment of fees on academic institutions may be court-driven, but could you advise me on how you calculated the fee to assess and how you arrived at the decision with respect to discontinuing the exemption since the court merely objected to the weak rationale for the previous exemption?

Senator LIEBERMAN. Let me add that Senator Kempthorne is not the only one to receive a call from a university on this subject.

Mr. SELIN. First of all, I'd like to emphasize that this has to do with FY 1991, FY 1992, and FY 1993. In FY 1991 and FY 1992 the other licensees bore their share of the university exemption, to be reimbursed without the universities having to make retroactive payments. So, all licensees would get reimbursements for the three years. The universities would have to make a payment for FY 1993 that they had not expected and had not budgeted. As far as FY 1994 and thereafter, we have a parallel process to reexamine the whole question of fees and develop a rationale from scratch.

As I explained to Senator Lieberman, we pay enormous deference ourselves, to both the Congress and the courts. We try very hard to make sure that we not be seen as abusing our authority and when the court tells us that our logic is murky, we read that as being the tip of the iceberg. For a court to disagree with us, we know they're pretty unhappy with what we're doing, so we took a very good look at their argument and they said, really, two things on this question.

First of all, the fact that universities cannot pass along any increase in license fees really is not a fair rationale since there are many other organizations that are not able to do this. Unless we are ready to apply that rule systematically, across the board, we would not use that rule.

The second question, although it wasn't quite so pointed, is that universities contribute to the general good, but so do a lot of other people—charity hospitals and many other people. We hadn't made that argument very convincing.

On April 23, we went out with a Federal Register notice to explain what the court situation was. We put in what we hoped we would be able to support as a bill and as a rule that would support this exemption of universities. The Rule was published for comment and the comments were not very helpful. In fact, we essentially received no comments from universities on supporting this Rule.

Our solicitor advised us that to try to go back to the court and say that we were going to continue this exemption on a new basis when we didn't have a very good basis, which would basically appear that we were not responsive—that we were both abusing our authority and in fact, in an extreme case, might endanger the whole fee structure. So, what we decided to do was, first of all, to follow our legal advice, but to set up criteria that universities could meet in requesting an exemption from the 1993 payment. If they could show both severe financial hardship and that they were providing not just benefits to the general world, but to other licensees,

too in other words, that they could look at the graduates that they've had and how these people have gone out to other licensees to support them in the nuclear area, that we would entertain exemptions for 1993 on their license. But, we did not feel that the general benefit done was one that we could support in court—that if other licensees are asked to pick up the bill, that these people should be able to show that the other licensees benefit indirectly from their activity, so we followed the court's quite strong lead and set up a quite clear standard in telling these licensees what they could do in order to try to get an exemption. Of course, there are also some liberal payment schemes.

Senator KEMPTHORNE. I want to say that one of the universities that complained to us about this in the last couple of days said that they simply had not seen it in the Federal Register because they are not accustomed to following the Federal Register. I wonder if you normally do any more direct outreach on this kind of thing? To the universities?

Mr. SELIN. I am completely unable to support that statement. I mean these people are represented in their business. They certainly heard about the fees when they came up. We've carried out the legal responsibility for notice. There was a second notice in the Federal Register almost at the same time—four days earlier—as called for under the Energy Policy Act to review the fee structure for 1994 and thereon. We will try to review this, not in response to the courts, but to see what makes sense.

I have a great deal of sympathy for the position that the people are put in, because this wasn't something that they budgeted for. By the way, this very innocuous note tells me that, in fact, the proposal is for all licensees to rely upon the Federal Register. There are a lot of problems with what we're doing, but I don't think the Federal Register notice is one of them.

Senator KEMPTHORNE. If I may, Mr. Chairman, just follow up on this point and then I have one other question.

This particular university summarized the reasons they did not respond. They said that they did note the Federal Register notice addressing the waiver of university reactor operating license fees. They said that the wording of that article did not seem to require comment. It appeared that the Commission was simply making the statement that they intended to continue waiving university reactor operating license fees, therefore we did not respond and, third, the situation was further compounded by appearance in the Federal Register of a request for comment with a July 19 due date. This was on a closely related, but not obviously different matter.

Mr. SELIN. Senator, all I can say is that we are in a situation where we do not believe, with the information that we have at hand, that we can support the exemption for FY 1993 without threatening the whole fee structure. I have no doubt that we might have done a better job of communicating this although a reading of the document which showed that our proposed rule was very sympathetic to the universities and that indicated where the Commission's hearts lay, but the statement in front of it made it clear that the courts had seriously questioned this point. The fact is, we've done what we believe to be the most that we can do. The Commission is extremely sympathetic to this view and it was with only the

greatest reluctance that we went ahead with this and we put in what are really quite liberal and very explicit statements of under what conditions, on a case-by-case basis, that an exemption will be considered.

Senator KEMPTHORNE. I would well imagine, as indicated by the Chairman's comments, too, that you will begin hearing from a number of universities. Is this an issue, then, that you could revisit?

Mr. SELIN. Not for FY 1993. If you talked to individual Commissioners—we've had so much soul searching on this point. We've got four PhD's and a man with an advanced law degree—most of them come from nuclear programs—and we don't want to do this at all. We have stretched as far as we feel, given the statute and given the court, is responsible. We've given these people a clear avenue if they can make the specific argument—not the general argument—to ask for an exemption. I really don't think we can do any more given the overall structure of the fee schedule.

And, there's no sense in their calling the Commission. The rule is set and now it's between them and the staff on specific points, making the substantive argument as opposed to philosophical.

Mr. REMICK. I have to add some additional comments, because there are some differences on the Commission on this very point, on whether universities had adequate indication of what was the intent of the Commission in that notice. The Commission had decided that it would continue the exemption and the notice that went out strongly supported the basis for continuing the exemption. It did ask for comments on the externalized benefits and so forth, going back to the court decision, but my honest reading of it was that universities had no indication, other than the fact that the Commission was going to continue the exemption.

There was some confusion, I believe, because we do have another notice out in response to the Energy Policy Act of 1992 on reviewing the issue of fees and I believe the universities were under the impression that was their opportunity to provide any greater arguments on external benefits for exempting fees to universities.

It's not only the research reactors that are being affected, but it's also the material licenses at universities.

So, we do have some differences in this area. The commission decision is one that will grant the opportunity for exemptions to be granted. It's unfortunate that if exemptions are granted, then that will be less revenue for the Federal Government in those cases where, if we had gone with a generic approach of exemption, the others would have picked up that portion of the fees as has been done in the past.

Mr. SELIN. We're not trying to punish the universities for not coming in. The Commission does not have available arguments that the majority of the Commission believes will support the rationale that we have heard in Congress. The universities had an opportunity to provide that, which just means that it was another source of the information. But the bottom line is that we don't think we have the information. We might have done a better job ourselves, the universities might have done a better job—any of a number of things could have happened—but it's just that we can't support a counter argument at this point.

Senator KEMPTHORNE. I think you have the universities' attention now and I think this could have a real negative impact on nuclear education, and some of those young students that dream of becoming NRC Commissioners some day.

[Laughter.]

Senator KEMPTHORNE. Mr. Chairman, I have another question, but I'll just wait if we're going to do another round of questions.

Senator LIEBERMAN. Sure, we will.

Senator Faircloth, welcome.

Senator FAIRCLOTH. Thank you, Mr. Chairman.

I want to thank the Commissioners and the witnesses for being here today to discuss the reauthorization of the Nuclear Regulatory Commission.

I have a very direct interest in this. I'm new to the Senate, but I live within an hours drive of two—in fact, between two—nuclear plants, so I have a very personal interest in seeing that they are closely monitored and safely operated. I came to the Senate to see what could be done to bring common sense to the regulatory process. The plethora of rules and regulations that include everything we do—and that includes the nuclear industry and the Commission which oversees it.

With an industry so inherently subject to misconception as the nuclear power industry, I suspect there's a lot of room there for some common sense. I think so.

Dr. Selin, as I understand it, the Chairman of the subcommittee, Senator Lieberman, plans to introduce legislation which would, in large measure, take away your authority to give the final word on public petitions which challenge the safety of operating nuclear plants and, instead, give it to the courts. If you have to go to the courts with each of these petitions, could the oversight responsibility suffer as a result of this?

Mr. SELIN. To be absolutely frank, Senator, I think the only effect of this legislation passing—other than some embarrassment to the Commission for being singled out—would be that we would have to spend a little more money and a little more time and stretch out some of these positions that could be made quite well and quite finally at the Commission basis. I think the chances of our oversight being reversed or undercut are negligible—I really think that there would be no practical effect and it would be an additional cost. But, safety would be neither greater nor less great if the legislation passed. The net results would be similar and I hope that through the workshop communication and internal process, we can do better.

To put it in simplest terms, I think it's a legitimate concern that outsiders should understand that the Commission deals with these 2,206 processes better than they do today and if there's room for improvement, the first line is to improve how the Commission deals with the processes rather than put another line behind us. I just think it would be a waste to have the judicial review ability when the same amount of effort could more productively be focused on how the Commission itself deals with the petitions, rather than what happens when its completed. I don't think safety would be undercut—I'd just spend a little more money and the fees would be a little higher to do the same job that we're doing today.

Senator FAIRCLOTH. Well, I certainly have the greatest respect for Senator Lieberman and his ability as an attorney and as a judicial thinker. But, it does bother me that if you get into the courts, there is no end to the amount of time and money that can be consumed by that process. I mean, everybody knows that is a way of tying up and holding up anything they want to. We all know, whether the Federal Government is hiring them or the private sector is hiring them, the cost of attorneys has become astronomical. Would our resources be better spent serving and looking after the plants than to have to litigate every petition that came before you?

Mr. SELIN. My daughter just graduated from law school in June, so I have a certain amount of conflict of interest.

[Laughter.]

Senator FAIRCLOTH. I've got one I'm trying to get to go.

[Laughter.]

Mr. SELIN. The people at the other side of the dais are lawmakers. When they see a problem,, it's a natural inclination to try to fix it with the law and I think that's a perfectly reasonable thing. We are regulators and our approach is to try to fix it with what is under our control and our approach. I don't think there's any question that the process could be more transparent and more credible than it is today. We do not believe that the amount of resource that would be diverted would be large, but we do not believe that it would be a productive diversion—that the resources are better spent, not just in the broad sense of health and safety, but in operating internally. I should say that it's been about a year since the general counsel came to the Commission and said that the process really needs to be updated, so we show some significant sensitivity to the broadly expressed dissatisfaction with the lack of transparency, and we do want to do some thing about it. We just would rather not do it through statute.

Senator FAIRCLOTH. One thing that concerns me with this type of automatic judicial review of all Federal agencies is that we would see the litigation cost of Government just absolutely explode. It would make a lot of attorneys rich—probably including your daughter—but we've got to learn in this Country that the court should be the last resort, and we have tended to make the courts the first.

Mr. SELIN. I can only speak for the NRC's point of view, but we believe that this deference we have—the respect we have from the Congress and the deference we have from the courts—is like many other points of confidence, if you even start to lose it, it's very hard to get it back. We make enormous investments, not even to come to the 5 percent point of having a court look at what we're doing and saying substantively that they disagree with us. As a result, we probably already incur the major part of the cost that would be involved in going to court. We don't think that's a bad bargain. I can't speak for other agencies, but in our case, we have what amounts to a very thorough internal quasi-judicial review. We have the Executive Director's review and we have the Commission looking over his shoulder. As far as the general question of litigation, in our area we have such extraordinary authority and such extraordinary deference that is paid us by the Congress that we think

it's not a bad idea that we have very tough internal procedures to ensure that we don't abuse this deference.

Senator FAIRCLOTH. Not being a lawyer, and not having had a chance to discuss this with Senator Lieberman which I'll look forward to doing so at some other time, but since the nuclear power industry is not going to grow in the short term, why are we raising the fees the industry pays for their own regulation? Why not reduce the fees?

Mr. SELIN. That's really a general theory that the Congress and the executive Branch have on user fees in general. Our job is to administer the law—we don't have a strong opinion as to what the degree of fees should be, so I'd like to duck that.

Senator FAIRCLOTH. This is one of those situations in which the new terminology for a tax increase amounts to a reduction in friends.

Thank you.

Senator LIEBERMAN. Thank you, Senator Faircloth.

Mr. Selin and I had a fairly extensive discussion on the earlier questions about judicial review and I look forward to continuing that with him and with you as well.

I'm going to run the clock on us at five-minute intervals so we can keep going on.

Commissioner, you made some brief reference to this proposal to allow the NRC to do warrantless searches and I just wanted to ask you to go into that in a little more detail because I know it has aroused some concerns, although I must say in other areas of the law I have generally supported searches with some standards without warrants. I'm interested in knowing why you needed it, particularly because there's a suggestion in the testimony that you already have a fair amount of that authority.

Mr. SELIN. First of all, I'm talking about getting information from people who are not licensees but rather are suppliers to licensees. When it comes to people who we license, we have all the authority that we need.

Senator LIEBERMAN. So the request is really limited in that regard?

Mr. SELIN. Yes, sir. These are people who do fasteners—standard equipment, but up to safety standards, not to general commercial standards. Very often the question arises as to whether they've really done the testing or the quality control that they say they have done and the only way is to go in and get the records, and these records are easy to destroy. In principle, there are three ways to get the records. We can go and try to get a criminal search warrant, but the burden of proof to get a criminal search warrant that was foreseen by the Congress telling us how to regulate the industry and then there's the practical problem that we have to convince a U.S. attorney that there's a case that could actually be prosecuted. It can be done, but it's a much tougher standard than I think the general public expects of us in carrying out health and safety regulations. The second is subpoena and, as you know, sir, the problem with a subpoena is that by the time you've put out the subpoena and you've gone through all of the arguments, pro and con, a lot of time has passed and the ability to protect the records may have been lost, so the only remaining option is what amounts

to a civil search warrant—a search warrant traditionally granted—it would not give us the authority to just go in. We'd still have to go to a court, get a warrant, and it would be limited to the question at hand and to the kind of records at hand, but it would have the benefit of surprise. Generally, in principle, one could get an administrative search warrant but, in fact, the courts have not issued search warrants to agencies that have subpoena powers, so the fact that we have subpoena power in these few cases actually works against our ability to go in quickly and get the search warrant.

Just to go a step further, Mr. Chairman, there are a small number of examples—two is, I think, a small number—of agencies that do have such search warrants.

Senator LIEBERMAN. That was my next question.

Mr. SELIN. One is the Department of Transportation, which can go in to check odometer readings on used cars. Looking down at the work that our colleagues do, we really do think that the safety and health considerations that we're dealing with are at least as great as that.

The FDA is also able, in certain circumstances, to get search warrants which is a much closer analog to our situation. We have looked at specific examples of places where we went in and were refused entry and by the time we got in, there were no records there. There might not have been any records there to begin with. It looks like about two or three times a year that we would use such a warrant.

Senator LIEBERMAN. OK. A different kind of question. This goes to the NRC's office of investigations which in one of the reports that we saw, indicated that last year it closed about a hundred cases due to a lack of resources. I presume they're closing cases of less import, so the questions are two—what types of allegations are not being investigated and then, second, does the office of investigation have adequate resources?

Mr. SELIN. Of course, nobody has adequate resources.

Senator LIEBERMAN. That's the right answer to that question.

Mr. SELIN. But, the office of investigation is not noticeably short of resources, given our current budget, as we'll discuss at your next hearing on how we deal with allegations. For reasons that are not purely resource reasons, every time we get a health and safety allegation or a harassment and intimidation allegation, that allegation is checked out from a safety point of view. That's not really an OI function as much as it is a staff function. When I say safety, I mean in the technical sense—is there a valve that's broken rather than is there an environment that discourages allegations. But, following up on the individual complaint to see if there has been discrimination, therefore from our point of view, whether that company should be put on notice that they're not treating employees right. We do not follow up on such complaints while the Department of Labor is looking at the person's complaint of view for remediation. We would not have the resources to do that. In other words if, for program reasons, we changed the way we do investigations, we would have to increase our OI resources, but given our current philosophy, which is somewhat driven by resources, but I think generally driven by a whole lot of program consideration, we have sort of adequate resources—they're not noticeably short.

Senator LIEBERMAN. Thank you.

Senator KEMPTHORNE.

Senator KEMPTHORNE. Mr. Chairman, thank you.

Finally, on that university issue, Mr. Chairman, I'm sure we share the common belief that university education budgets are stretched as it is and I think this will have impact. I would certainly be willing to work with you to see if there's something that could be done. If nothing else, to help them so that this is not immediately upon them, as it is something that they did not take into consideration with their budgets.

I always find that whenever I'm told "nothing can be done," I find it to be a good challenge, to see if we can't do something.

Mr. SELIN. Senator, that wasn't the question, but I would like to make a point with respect to FY 1994 and thereafter. The Commission feels that it is unfair, unwise, and really hurts our credibility when one set of people get exempted for the general good and other licensees have to pick up their fees. The main point that we're looking at in the procedure that was set up under the Energy Policy Act is areas where the agency is doing things, not so much for the licensees, but for more general purposes such as support for some of the international programs, et cetera. Our feeling is that if, for reasons other than benefit to the industry as a whole, people are given exemptions, that should come from appropriated funds. It should not just be reallocated through other licensees. That's where the rub comes—that's where the unfairness argument comes. It's not that we're trying to penalize the universities or anybody else.

Senator KEMPTHORNE. All right. Commissioner Remick, let me ask you a question.

Mr. REMICK. Yes, sir.

Senator KEMPTHORNE. I'd like to invite your comments on the merits of an advanced nuclear technology under development at the Idaho National Engineering Laboratory which is called the Integral Fast Reactor—the IFR.

As I understand the technology, which is on the verge of proving itself, it may accomplish some very important objectives. One, it can recycle actinide from most current nuclear waste sources, reducing our long term nuclear waste disposal problems. Two, it can effectively spoil and convert to civilian energy, the plutonium from 40-50 thousand nuclear warheads that are in surplus now. And, number three, it is proliferation resistant with fuel recycle design and possesses inherent passive safety features.

So, can you please comment? I know that you've been doing some work on this.

Mr. REMICK. I assume you're asking my professional opinion, not necessarily that of a Commissioner, because as a Commissioner we basically look at the health and safety aspect of the designs that are either proposed for us to review for licensing or plants that are in operation. The reactor concept associated with what has become called the Advanced Liquid Metal Reactor has been reviewed by the NRC. As a former member and chairman of the ACRS I was involved in that.

I don't think that's your question, so if I put aside my Commissioner hat and just talk as a nuclear engineering professional, I

have to say that I think the IFR concept is an extremely interesting concept from a number of viewpoints that you've expressed. There was much interesting work that has been going on out in Idaho. I visited that facility I guess approximately a year ago and also went to what is called Argonne East outside of Chicago and looked at some of the related activity.

Speaking just as a professional, I think it's an extremely interesting concept. I think it has a lot of potential, in general. The concept of the IFR being used for actinide burning or the consumption of weapons plutonium and things like that, from my standpoint, has a lot of potential, but it has a ways to go. Speaking as a professional, personally, I would like to see that work continue and I think it could have long range importance to the Country. I'm speaking not as a Commissioner, but I think your questions were addressed more in the area of concept and the potential for that concept.

Senator KEMPTHORNE. I appreciate that. I'll put in one final question. Given all that we're reading and hearing regarding nuclear safety in Eastern Europe and the former Soviet Union, I'd like to have your views about how things are really going with respect to all of the so-called assistance that has taken place.

Mr. SELIN. I've personally been very much involved in this as Chairman of the NRC and as an outside professional. I believe that the problem is huge. I believe the American programs are pretty good, but they only scratch the surface. What came out of the Munich Summit was a decision by the West to provide a fairly limited amount of short term assistance to improve operations and use at some of the most high risk—particularly fire risk—plants and improve nuclear regulation.

The United States actually has projects under way that will spend some \$21 million cumulatively in these three areas, and I think they're pretty good projects. I think they're well worth the money, but even if they're enormously successful, they won't have a very large impact on nuclear risk in Eastern Europe. We see cancers and we have band-aids and mercurochrome available—it's good to get some control on the lesions, but they don't solve the problems.

What is really needed mostly has to come from Russia and the Ukraine with some active help from the West and that is some thorough economic reform, with less reliance on some of these intrinsically unsafe reactors, so that they could be replaced either with the modern nuclear reactors or non-nuclear electricity, and have this done on a commercial basis. Nobody in the West is going to put up \$20 billion in aid and if the Russians have to pay it, it is much more likely that they will do responsible things.

That's way beyond the scope of the programs that we undertake. I think our Government has its act together and is doing quite a good job but it's a very limited first step. We'll never get to the second point if these little projects are not successful. There has to be some pattern of success, some confidence building, some communication so, in that sense, the possibility of these projects goes quite a bit beyond the short term objectives. The NRC has been working with the Soviet Union through successor republics since 1988. I think you would find even DOE witnesses would say that the regu-

latory part is going quite well, but if the underlying operations aren't safe, regulation can't turn them around.

Senator KEMPTHORNE. So, do these countries in Eastern and the former Soviet Union have the technology, and simply chose to ignore environmental concerns?

Mr. SELIN. Let me say this about the former Soviet Union. The situation in Eastern Europe is much, much better than the one I described. The Czechs really have a rather good program and they're on their way to getting some Westinghouse equipment to improve their reactors considerably. The Hungarians are pretty close to world class. The Bulgarians have some serious problems but are making a major effort, with a lot of assistance, to overcome them. The major problems are in Russia, Lithuania, and Ukraine.

Senator KEMPTHORNE. Again, if I may. With regard to Russia, do they have the technology and have just chosen to ignore the environmental concerns?

Mr. SELIN. The "they" sounds like there's an effective, monolithic government. There isn't. There are people who have the technology and the people who are making the economic decisions and they are not the same people. This is not a country that has, in the past, faced up to unpleasant facts publicly and taken strong reactions.

When I visited Chernobyl a year and a half ago, the Ukrainian regulator told me this anecdote—that if a Russian sees an oil-soaked rag sitting on the ground, remembering that fire is perhaps the major threat in the area, he won't stoop to pick it up. Once the fire takes place, he will risk his life to save his buddy and try to put that fire out. They don't have a prevention-safety kind of culture there.

Environmental issues are a whole separate set of issues. They've abused their environment so drastically for the last 70 years that cleanup is almost out of the question—it's a question of containing damage so it doesn't spread. But, it's not a technology thing in the sense that they're highly intelligent people. Transferring from technology to budget has been a big weakness. Running the plants safety-first has been an even bigger weakness, letting the economic and political decision makers share some of the concern that I know you feel.

Senator KEMPTHORNE. Thank you very much. Mr. Chairman, thank you.

Senator LIEBERMAN. Thank you, Senator Kempthorne.

Senator Kempthorne's question about the Idaho program invites me to ask one about a Connecticut program. Although both have wider implications, of course.

This has to do with the ABB and the CE which is partially located in Connecticut, and is in the process of submitting a design, as you may know, for a so-called evolutionary reactor, which they are hoping to have certified by NRC as part of a competition that they're involved in to sell it in Taiwan.

Their concern expressed to me is about the timeliness of your ability to review and make a judgment on whether you can certify, which will have an impact on their ability to compete for this contract and, we hope—presumably—on jobs in this Country.

How are we doing on that?

Mr. SELIN. Let's go to the bottom line. Given the current pace, given the extraordinary flexibility that the Taiwan authorities have chosen in what they require at each point in the process, it is highly likely that they'll have the documents that they need—at this point in the process, a draft safety evaluation, to bid, and a final safety evaluation although not a full certification, which they don't need to win the bid in order to deliver the project. So, that's the bottom line.

The other point is that they had two concerns. One is that since they were second in line, they were afraid that we would hold them up if the people at the front faltered. That is not a valid concern—we have full teams working on both. The generic issues have been resolved—all the issues now are vendor-specific. If General Electric has some problems, then they could come ahead. You've got two airplanes, two ground crews and two gates, so it's just a question of who gets there first. Resources, although never easy, are not really the problem. Putting more money or more people on the project probably slowed things down, but they're in the home stretch.

Senator LIEBERMAN. Good. A different kind of question. Earlier, in April of this year, the New York Times reported that the NRC staff had identified 15 nuclear powerplants whose reactor vessels have become quite weak and so much so that they need careful and extensive analysis to determine whether they're still safe. It happens that the Millstone II plant in Connecticut is one of those. I want to ask for a report on the status and, to use your phrase, the bottom line. Is it safe to continue the operation of these reactors while the studies are under way?

Mr. SELIN. First of all, the headline in the article is wrong. We never talked about testing, but the article overall is quite accurate.

We talked about ductility and embrittlement. In other words, how brittle is the reactor? Of particular concern is, if cracks start for a number of reasons, that they would propagate, not in an accident, but just sort of in normal operation that they might propagate throughout the reactor vessel. We have what's called the screening precurent—it's a very conservative precurent. It says that if a certain test produces a certain number, you don't even have to look any further. The fact that it doesn't produce a number doesn't mean we have a problem, it just means that you can't rule it out, out of hand.

According to the staff's rather conservative calculation, the Millstone II reactor, in about the year 2007, would not pass the screening precurent. The license is good until 2015.

Senator LIEBERMAN. So, in that sense, the problem is worse than was expected when the facility was opened.

Mr. SELIN. People didn't know. That's why for every reactor except Yankee Rowe, we required samples of the same material that's used in the vessel and particularly in the wells be put in the reactor at the high flux points and taken out and examined so we wouldn't be just extrapolating from initial analyses—we would actually have some experimental results.

I think the bottom line is not that they are or aren't in good shape, but that under the most conservative conditions, just as you need to do with the second level of analysis, to see if by the year

2007 the reactors vessel's brittleness has passed a real point—a lack of ductility, as opposed to some surrogate. There's a lot of time between now and then to do the analysis. If it turns out—which is not our expectation—but if it turns out that there's a real problem there, of course, we would not permit them to continue. But, we don't want to repeat the Yankee Rowe experience where the parties have not even agreed on how to do the analysis-measured results. We want that out of the way long before there is an actual situation.

Senator LIEBERMAN. So, there's no question now about their safety in terms of their continuing operation?

Mr. SELIN. There is no question about their safety for now.

Senator LIEBERMAN. Then the only questions that remain are not as yet determined whether these plants will be able to operate for the full term of their licenses?

Mr. SELIN. Yes, sir, that is the issue right now.

Senator LIEBERMAN. Thank you.

Senator Kempthorne?

Mr. REMICK. Could I just add something?

Senator LIEBERMAN. Certainly.

Mr. REMICK. I have a related comment, but not directly, to the question, but I wouldn't want to miss the opportunity. From time to time, people ask why should a regulatory body like the NRC conduct research and you're touching on a related area right now, the reason that we are in a strong scientific and engineering base in this area is because the old Atomic Energy Commission started some research on heavy section steel technology—actually started by the Naval Research Laboratory years ago. The NRC has continued this work at Oak Ridge—I just happened to have been down there Monday reviewing that program.

It's one of the prime examples of research that the NRC has continued. If we did not sponsor that research, it would not be done in this Country and perhaps not anywhere in the world. In an area as extremely important to safety as pressure vessel integrity is, we've continued that research from year to year. Maybe you can't point to the importance of doing that research in any particular year, but when we needed it like with the issue of pressurized thermal shock and with the issue of the Yankee Rowe vessel, we had that nucleus of expertise with a lot of information available to us.

I did not want to miss the opportunity to stress the importance of having a regulatory body having some ability to conduct research that others would not do, perhaps. It's very important in the long term.

Senator LIEBERMAN. It's a good point and It was well made.

Senator Kempthorne.

Senator KEMPTHORNE. Mr. Chairman, I have no other specific questions other than to just ask the other two Commissioners if you wish to comment on any of the items we have discussed this morning?

Mr. CURTISS. I guess I'd make a comment on the 2.206 process which has been the subject of a lot of discussion here.

We, as an agency, have taken the position consistently before the courts and, of course, here today that the 2.206 petitions of an enforcement nature ought not to be subject to judicial review. It's a

position that, in my view as a lawyer, has a firm foundation in the Supreme Court decision of *Heckler v. Chaney*, and it's one that has been recognized by the circuit courts that have addressed the issue uniformly and without exception.

There's a point here that I think probably needs to be emphasized. I think the Chairman has aptly pointed to the fact that judicial review is not going to change the result—we're going to carry out the same rigorous kind of analysis of 2.206 petitions that we did before. And, in fact, we did that at a time before *Heckler v. Chaney* in 1985, when those decisions were subject to judicial review and the record, I think, is aptly cited by the Chairman as a very successful one. At the bottom though, it seems to me that the important distinction is that we have viewed 2.206 petitions as enforcement matters and from my perspective, with the five years on the Commission that I've had now, it seems to me that it's quite problematic to try to promulgate a standard, whether it's in legislation or in an administrative regulation that governs an area that is subject to such discretion and the need for flexibility when it comes to 2.206 decisions. We have, I think, a sound process. We've reviewed over 350 of these since we were established and I think a review of the 2.206 petitions and our responses will support the substantial effort that's gone into the sound decision making process.

I share the views that were expressed earlier that what we don't want to do here is judicialize a process that will involve an attendant commitment of resources on our part when, at a time of limited resources we need to focus those on real safety questions. It's not clear to me that we'd accomplish that by subjecting these 2.206s to judicial review.

We have, it should be noted, in a context where we view 2.206 as action as largely licensing in nature, agreed that those petitions ought to be subject to judicial review, so it's not a fear of what we might encounter when we get into the courts. But at bottom, the point that I think needs to be emphasized and I think is behind the Commission's position in the courts and here today, is that the enforcement nature of these actions is inherently something that requires a degree of discretion and doesn't lend itself to the pontification of a standard that would govern in every single case. I thought that was a point I should leave you with.

Thank you.

MS. DE PLANQUE. I just would like to add a comment about the university situation that you're concerned about.

I think the Chairman properly characterized the decision of the majority in this case and I think Commissioner Remick indicated that this was a very difficult decision for all of us. In our hearts we were very, very sympathetic with the situation in which we've placed the universities both through the reactor programs and through the materials programs.

I would hope that since we have provided for a means for exemption for 1993 that the Commission will, in fact, be as liberal as possible in granting those exemptions. It's important that the university understand that the situation for applying for those exemptions will be available and that they carry out that function the best way they can so that we can, in fact, be as liberal as possible.

Senator KEMPTHORNE. Thank you very much.

Thank you, Mr. Chairman.

Senator LIEBERMAN. Thank you, Senator.

I think we've given you enough of a workout this morning. I appreciate your responsiveness and look forward to working with you throughout this authorization process and on the related legislation.

Thank you very much, again, Commissioner Curtiss, and good luck.

Mr. CURTISS. Thank you.

Senator LIEBERMAN. The final panel, the second panel, Bill Magavern, Director of the Critical Mass Energy Project of Public Citizen, who is accompanied by James Riccio, who is the staff attorney on that project.

Gentlemen, welcome. We look forward to your testimony.

Mr. Magavern, do you want to begin?

STATEMENT OF BILL MAGAVERN, DIRECTOR, CRITICAL MASS ENERGY PROJECT, PUBLIC CITIZEN, ACCOMPANIED BY JAMES RICCIO, STAFF ATTORNEY, CRITICAL MASS ENERGY PROJECT, PUBLIC CITIZEN

Mr. MAGAVERN. Thank you, Mr. Chairman, Senator Kempthorne. Thanks for inviting us here today. We're especially glad to be here to talk about the role of public participation in nuclear regulation, specifically regarding judicial review of NRC denials of the 2.206 petitions. The bulk of our testimony will focus on that, but we also welcome your revival of the authorization process.

We applaud the introduction of the Nuclear Enforcement Accountability Act of 1993. Passage of this bill would represent a first step toward giving citizens living near nuclear facilities an opportunity to participate in the consideration and resolution of matters affecting their health and safety. Therefore, we support the bill and we have two drafting changes to suggest which we believe would make it more able to accomplish its purpose.

Public participation is an essential part of safety and environmental regulation and is recognized as such by other statutes within this Committee's jurisdiction. If the NRC is ever to gain credibility as an effective and impartial regulator, it must actually involve the public rather than merely giving the appearance of openness.

Section 2.206 is the only legal recourse available to citizens who have safety concerns about NRC licensees. While most environmental statutes allow citizen suits, as the Chairman has already pointed out, the Atomic Energy Act does not. Furthermore, citizens do not even have access to important information like the safety-related documents supplied to the NRC by the Institute for Nuclear Power Operations. Unfortunately, the Commission has prevented the "show cause" petition from allowing affected citizens to participate in the consideration and resolution of serious safety problems.

This section of the NRC's regulations allows any person to request that the NRC institute proceedings to require a licensee to show cause why its license should not be modified, suspended, or revoked. However, the Commission admitted to a Congressional

Subcommittee in 1991 that it had allowed only two hearings in response to 321 petitions, both of those two coming before the *Heckler v. Chaney* decision cast doubt on the judicial review ability of these petitions. In only one recent case—that regarding Yankee Rowe—has the NRC held any kind of a hearing in response to a petition and that process did not afford citizens a right to discovery or cross examination.

The NRC's claim that it has granted ten percent of the petitions by taking some action is impossible to verify. Even if true, it hardly makes the process a success if the agency is denying outright nine out of ten petitions while in the remaining cases it excludes the affected citizens while it works with the licensees. In fact, the Union of Concerned Scientists has found that the NRC's pattern is to delay ruling on petitioners' requests for hearings until it can make a plausible claim that its own private interactions with the licensee have yielded sufficient improvement to justify denial of the hearing request.

Although the NRC is currently reviewing its 2.206 procedures, and we plan to participate in that process, it is clear that without judicial review, the agency will continue to deny most, if not all, show cause petitions without any accountability. In fact, the background paper for the upcoming workshops does not address the judicial review question.

Oddly enough, both the NRC and the U.S. Court of Appeals for the D.C. Circuit have decided that 2.206 petitions will be reviewable before reactors go into operation, but not after they start up. This is truly a distinction without a difference. Whether before or after criticality, members of the public have a strong interest in safety and in both cases would be asking the NRC to institute a proceeding regarding a license that has already been granted. There is no logical reason why petitions should be made unreviewable just because the reactor has already reached criticality, with all the risks that entails.

Since the NRC now claims that it "grants" petitions, even when it refuses to institute the proceedings described in Section 2.206, it is important that the legislation specify that the Commission must grant a petition that meets the criteria by actually instituting a show cause proceeding.

In addition, your bill, as currently drafted, sets the standard of review by cross referencing the administrative procedure act. Given the deference that is usually shown by Federal courts to administrative agency decisions, we recommend that Congress explicitly enunciate the standard of review to be the arbitrary and capricious or abuse of discretion standard—that that be actually specified in the legislation itself.

Passing this modest legislation should be a matter of common sense and not of controversy. In fact, as you've already noted, most of the environmental statutes like the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, have provisions for citizen suits. The right to judicial review of petitions to the NRC pales beside the right of citizens to sue for enforcement of the law.

If I could, I want to respond to the arguments that the Commission made. They argue that passing your bill would single them out

among other agencies when, in fact, it would only go a very small part of the way to addressing the uneven playing field as between this statute, this agency, and other environmental regulatory regimens. If the NRC is agreeable, and you are, we would be happy to see the bill, rather than address 2.206 petitions, institute citizen suits under the Atomic Energy Act. That's something that we would support. Your bill would be a first step in that direction and if they would rather make the trade, we would certainly accept it. I wholeheartedly agree with the comments that you made in your opening statement about citizen suits and public participation, and disagree with the NRC's comments. They contend that because they have a pervasive regulatory regime, therefore citizen suits are not necessary. In fact, their regulatory regime does not allow for the kind of public oversight that a citizen suit does involve and, in fact, we think that it's essential to have public participation not only on the licensees, but on the agency itself. The NRC clearly cannot oversee itself. The private attorney general role that is served by citizen suits would be at least as vital in this area as it would be in other environmental regulations.

Furthermore, Congress should not feel that passing this legislation would open up the proverbial floodgates of litigation. Most citizen interveners simply do not have the time, money, or resources to challenge petition denials in court. Moreover, the record shows, and the NRC has already attested to this, that prior to the *Heckler v. Chaney* decision, the agency was not overly burdened by judicial review of petition denial. I note that Chairman Selin, despite being prodded a couple of times by members of the panel, did not claim that passage of this bill would overly burden the agency and it would not significantly increase the resources allocated or the cost to the agency. In fact, before the Heckler decision, there was not a single case in which a reviewing court remanded a Commission ruling on a 2.206 petition for an explanation, let alone a case in which a court ordered the agency to take an action which it did not regard as appropriate. This standard in your bill would certainly not allow for automatic litigation of all petition denials. In fact, the standard is somewhat stricter than the one that was passed by the House Interior Committee last year.

We do hope that making these petition denials reviewable would instill some small measure of accountability for the actions of an agency that has very little credibility with the public. The NRC is severely limiting public participation in the area of grave concern to many citizens—that is its licensing renewal program. The agency has limited the scope of renewal proceeding to only those age-related issues that are unique to the renewal term. The NRC is neither going to review the documents which constitute the current licensing basis, nor confirm that a reactor is in compliance with the regulations it poses under the current license. That means that even if a plant is experiencing chronic management problems bearing directly on safety, that citizens in that area would not have the right merely to a hearing on those issues before a decision is made to extend that plant's operating license for decades.

In fact, I want to quote from Hal Lewis, the Chair of the NRC's Advisory Committee on Reactor Safeguards, Subcommittee on Regulatory Policies and Practices, on the subject of license renewal. He

said the, "The general argument that the fact that one has operated safely for a finite period of time proves that the safety level is adequate is just not statistically right, because there isn't that much history in the industry. And, it's a trap because in other agencies, for example, people have used the argument that they had 24 shuttle flights to show that the level of safety was adequate and, in retrospect, after one disaster, it turned out not to be. The Soviets, after Chernobyl, suddenly discovered the level of safety they had for Chernobyl was not adequate. But, the day before Chernobyl they would have said it was adequate on the basis of operating history."

This makes the review ability of the show cause petitions all the more important. The NRC currently has no regulations which establish standards when a reactor should be closed down. So, this is very important to the question of aging reactors—if citizens argue that a reactor has aged to the point that it's not safe to continue operating, they would need the petition process in order to make that argument.

We question the Commission's priorities in expending resources on the question of license extension beyond a 40-year lifetime when, in fact, no nuclear plant has lasted more than 30 years—no commercial powerplant—and the two lead plants for renewal have run into problems that have prevented applications from being filed. Many other reactors have experienced premature aging due to the affects of prolonged exposure to radiation. You've already discussed the embrittlement problem and, in light of this and other serious problems, the agency's resources would be better spent furthering the safe operation of nuclear powerplants under their current licenses rather than looking ahead to a renewal process which is still hypothetical.

Another disturbing area is the NRC's forging ahead with an initiative to "eliminate requirements marginal to safety". This vestige of the Bush-Quayle deregulatory push is prompted by the fact that many nuclear plants are economically noncompetitive. In its rush to help bolster the profits of nuclear utilities, the NRC may shift from regulation to regulatory guides that do not carry the force of regulation. It is surprising that the NRC would be putting resources into deregulation at a time when many reactors do not meet the established safety requirements. A particularly egregious example is the case of Thermo-Lag, a fire protection substance that does not work. The NRC has denied a 2.206 petition on Thermo-Lag and is now trying to deregulate the problem away. A current example that again makes the point that we need to bring judicial review into the process.

Again, we support your bill, look forward to helping to enact it, and we'd be happy to take any questions.

Senator LIEBERMAN. Thank you, Mr. Magavern, for your testimony. It was very helpful.

Why don't you respond a little more to what seemed to be perhaps the major criticism of the bill that we've put in on judicial review ability, and that is that it would create a flood of litigation. Maybe I should focus a little bit by asking you how difficult it is to bring a suit for judicial review of an NRC decision or, in another

sense, what type of constraints do organizations such as yours, which would presumably file such suits have?

Mr. MAGAVERN. Well, in fact, we are in a better position than most organizations would be to file suits, and for us it would certainly be a question of resources involved, time, the legal staff that would have to be involved, court expenses, and whether, in the end, it would really make a difference compared to other ways we could be expending our resources. Many of the citizen groups across the Country, with whom we work, would have far less capability than we would have. We know, in working with some groups that have been trying to litigate on issues on their particular plants, that they have extreme difficulty in raising the money to retain legal counsel, and this is something that could not be done routinely by those citizens, but would only be done in extraordinary circumstances.

Senator LIEBERMAN. Let me ask you what effect you think judicial review ability, if enacted, would have on the NRC? Do you think that the NRC would likely deny fewer petitions?

Mr. MAGAVERN. We certainly don't think that it would make a dramatic difference in terms of NRC public health and safety regulations. However, we do think that the NRC needs to be more accountable. I think their testimony today showed that they seem to think that their internal workings are so comprehensive and so accurate that they would basically take it as an insult to have outside scrutiny by a court. This is exactly an example of the problem that we're trying to remedy, that we need citizen oversight and we need judicial oversight, and that would help bring the NRC closer to the reality of environmental regulation as it's been updated by various environmental statutes that have left the Atomic Energy Act something of an anachronism. And, also the attitude of citizens across the Country that have concerns about the safety of nuclear powerplants and who really don't feel that the NRC is adequately meeting those concerns.

Senator LIEBERMAN. How about the concern that was expressed that judicial review would divert resources from health and safety oversight? Obviously, you're concerned about that kind of oversight. Do you worry about that potential consequence of judicial review ability?

Mr. MAGAVERN. I think that the best responses to that question were really given by Chairman Selin who, as you know, opposes your bill, and was certainly urged here this morning to say that it would do what you've asked about—put a burden on the agency and possibly be better spent other places—and he was very candid in saying that, actually, they already do most of the work that would be involved in their own review and that, therefore, judicial review would not add a significantly greater burden.

Senator LIEBERMAN. Let me ask you, finally, on this subject. I take it, from what you said earlier, that you're intending to participate in those public workshops. Is that correct?

Mr. MAGAVERN. Yes, the NRC called us last week and just yesterday we received the written materials that they're preparing. We do intend to participate, however, especially after reading the background paper, we do not see that process as being a substitute for the legislation that you and Senator Baucus have introduced.

Senator LIEBERMAN. I presume that you will raise the question of judicial review ability on that occasion?

Mr. MAGAVERN. We guarantee it.

Senator LIEBERMAN. OK. Let me ask you, finally, whether you have any specific views on any of the other NRC legislative proposals. It wasn't exactly within the target of your coming here, but since you're here, you do and I'd welcome them—either now or later in writing.

Mr. MAGAVERN. We took a look at the legislative package and it mostly seemed to us to have no problems. The one concern that we did have, which I've communicated to your counsel, is whether the civil monetary penalties that they want to institute could be used to intimidate whistle-blowers. I know you're holding a hearing on whistle-blowers next month and this is something that we think may be a problem—we don't know for sure that it is, but it bears some scrutiny.

Senator LIEBERMAN. I'm glad you brought that to our attention and we'll be sure to raise the question at that hearing next month on the whistle-blowers.

I thank you both for being here. I thank you for your testimony, and we look forward to your continuing involvement in these questions.

The record of the hearing will remain open for three weeks for the statements and responses to questions.

I thank everyone who has participated and this will formally recess the hearing.

[Whereupon, at 11:25 a.m., the subcommittee adjourned, to reconvene at the call of the Chair.]

[Statements submitted for the record and the bills under consideration follow:]

STATEMENT OF IVAN SELIN, CHAIRMAN, NUCLEAR REGULATORY COMMISSION

Mr. Chairman and members of the Subcommittee, the Nuclear Regulatory Commission (NRC) is pleased to appear before you to discuss S. 1162, the Nuclear Regulatory Commission's authorization for fiscal years 1994 and 1995, and S. 1166, the NRC's legislative proposals. We appreciate your interest and support for these bills, and look forward to working with you as they progress through Congress. As you requested in your letter of invitation, we are also providing comments on S. 1165, the Nuclear Enforcement Accountability Act of 1993. Accompanying me today are Commissioners Curtiss, Remick, de Planque, the NRC's Executive Director for Operations and Chief Financial Officer, and the General Counsel.

The NRC is responsible for ensuring that civilian uses of nuclear materials in the United States—in the operations of commercial nuclear power plants, and in medical, academic, and industrial applications—are carried out in a way which will adequately protect the public health and safety, the environment, and the national security. In implementing regulations, we work to prevent unnecessary road blocks for the industry we regulate while ensuring that our responsibility to public health and safety is not compromised.

Before describing the details of our budget, we would like to provide an overall perspective on the NRC's principal programs and explain how we are using our resources to fulfill our statutory mission.

NUCLEAR REACTORS

Approximately 55 percent of the NRC's budget request is directed to the conduct of our regulatory program for commercial nuclear reactors. The major part of these resources is directed to overseeing and improving the overall safety performance of operating reactors and conducting the research necessary to support such regula-

tory activities. Our reactor program also includes resources to extend the license terms for operating reactors and to certify new light water reactor designs.

Maintaining Safety at Licensed Facilities

The 109 reactors that are licensed to operate in the U.S. generate approximately 22 percent of the Nation's electricity. Over the past several years, the operational safety performance of U.S. nuclear power plants has continued to improve. This is demonstrated by the key operational safety indicators monitored by the NRC, which include forced outage rates, automatic scrams while critical, and significant events. These performance indicators are depicted in the first three charts in the appendix to our testimony. In general, the better performers appear to have reached plateaus where current performance levels are close to reasonable expectations while the poorer reactors lag behind in performance. It now appears that the most fruitful way for us to reduce overall reactor risk is to concentrate our efforts on the poorer performers to bring them up to the level already reached by the better performers.

Although performance is improving, we must remain vigilant to ensure that existing nuclear power reactors and other licensed facilities continue to be operated safely. A principal source of information by which licensee performance is judged is the Systematic Assessment of Licensee Performance, or SALP program. Under this program, the performance of each nuclear power licensee is evaluated through the periodic (usually every 18 months), comprehensive examination of available data, including inspection reports, special reviews, and licensing information. The purpose of the integrated SALP review is to direct both NRC and licensee attention precisely toward those areas that most affect safety and that need improvement.

The NRC's reactor oversight includes reactor inspections, particularly with the assignment of at least two resident inspectors to each reactor site. In an effort to improve the inspection process, we are modifying the SALP program and the reactor inspection program to focus even more on safety significant performance. We will place more emphasis on SALP results in shifting a fraction of the NRC inspection resources away from the better performers to focus on the poorer performers. Safety will be ensured while costs to the better performing plants will be reduced, providing additional incentives for plants to improve their performance.

Another key NRC responsibility is to ensure that each nuclear reactor is staffed with trained and qualified reactor operators. Toward this end, the NRC licenses all personnel authorized to operate reactors and requires requalification examinations to verify their continued proficiency.

The NRC also establishes physical protection requirements at commercial nuclear reactors. The objective of our physical protection requirements is to protect the public from sabotage-induced releases of radioactive material off the site. To establish a standard for protection requirements, the NRC created a design basis threat against which to protect—a hypothetical threat combining intelligence and technical studies on adversary characteristics—in an attempt to set prudent but reasonable standards for security at the plants.

The Commission believes that this is an appropriate time to reevaluate the design basis threat for radiological sabotage. Mr. Chairman, as you are aware, the present threat statement does not address the use of a vehicle or the use of a vehicle bomb against a nuclear reactor. To support this reevaluation, the staff has formulated an action plan and has made it available to the public. Phase I of the plan consisted of a reevaluation of NRC's position regarding vehicle threats, including an examination of earlier work, and of the intrusion at Three Mile Island and the bombing at the World Trade Center. The staff's findings and a recommendation were presented to the Commission on June 24, 1993; the staff recommended that the design basis threat be modified to include protection against malevolent use of vehicles at nuclear reactors. We expect to act on the staff's recommendation expeditiously. Phase II will have two parts. The first part will review other aspects of the existing design basis threat, such as group size and weaponry, to ensure that the existing design basis threat remains a valid basis for the design of protection systems at nuclear facilities. The second part of Phase II will review and analyze significant changes that have occurred in the recent past within the nuclear power industry to ensure that safeguards vulnerabilities have not developed incrementally over the years.

Additionally, with regard to safety at licensed facilities, the Commission appreciates the importance played by safety allegeders. For instance, the recent NRC Inspector General report on Thermo-Lag fire barriers highlighted the importance of allegeders in identifying safety-significant issues. The Commission has just recently received the ID's report assessing NRC's overall program for handling safety allegations. After the Commission has had a chance to review the ID's report, we will con-

sider the appropriate next steps to ensure that individuals with safety concerns feel comfortable bringing these concerns to the NRC.

Research

The NRC's nuclear safety research program will continue to provide the independent expertise and technical information needed to support our regulatory activities and to develop the regulations and guidelines necessary to implement Commission policy. It is essential to maintain an adequate research base if the safe use of nuclear power is to be continued; within the Federal government, this responsibility falls almost entirely on the NRC. Nevertheless, as reactor issues are resolved and reactor design test programs are completed, we are able to realize some reductions in the research program.

Maintenance at Operating Facilities

Because the Commission believes that improved maintenance programs will result in enhanced plant safety, we require licensees to monitor the effectiveness of maintenance activities for safety-significant plant equipment. The requirement is expressed in a performance-based rule that allows licensees the flexibility to utilize their existing programs to the greatest extent possible. We plan to evaluate the effectiveness of maintenance programs by comparing system performance against licensee established goals instead of concentrating on the maintenance process. Most importantly, NRC is taking steps to build on these maintenance initiatives to support the license renewal process, as described below.

Renewing Operating Licenses

The older nuclear power plants operating in this country are facing expiration of their original 40-year operating licenses—the operating license of the first plant expected to seek license renewal expires in 2004—and a 10- to 15-year lead time is necessary for licensees to plan for license renewal or alternative new capacity. One of the key issues for industry is knowing the NRC's requirements for license renewal up front in order for them to make reasonable determinations regarding the pursuit of license renewal versus some other means of replacement power.

The issuance of the NRC's rule on license renewal in December 1991 marked the completion of five years of intensive work on this very important regulatory issue. The rule establishes the procedures that a utility must follow in submitting an application, defines the requirements for license renewal, and identifies the information that must be submitted as part of an application as well as the requirements for implementing license renewal programs.

The NRC staff has developed a process for implementing the license renewal rule that focuses on the effective management of aging effects on the performance or condition of important plant structures and components during the renewal term. The specifics of this process represent an approach to implementation not expressly addressed at the time of rule promulgation. The Commission has made available to the public several papers detailing the staff's proposed implementation approach.

Outside the license renewal rule implementation, the NRC is continuing on its path to review license renewal applications. The Department of Energy originally funded lead plant applications for two nuclear facilities. Both lead plants have either cancel led or deferred their license renewal efforts for plant-specific reasons. As a result the industry is taking a different approach to license renewal—one that is more generic and less dependent on particular plants. We find this approach to be promising from a regulatory perspective since it may permit generic resolution of issues affecting several plants, thereby reducing the number of significant plant-specific issues to be resolved early in the process.

The Babcock and Wilcox (B&W) Owners Group has started discussions with NRC on a license renewal program for B&W-designed facilities; during the past few months they have submitted several technical documents to us for review. Submission of a license renewal application from a member plant in FY 1997 is one of the objectives of the B&W program. Additionally, the other owners' groups have indicated that they are considering a similar program. Baltimore Gas and Electric (BG&E) has also submitted their methodology for implementation of the license renewal rule to the NRC for review.

Reforming the Licensing Process

The NRC established a process to review future nuclear reactor designs that makes it possible to resolve safety and environmental issues before, rather than after, the start of nuclear power plant construction. The Energy Policy Act of 1992 codified this process, which provides for standard design certifications and combines

the construction permit and the operating license for nuclear power reactors. The NRC's rule provides for a degree of predictability in the regulatory process; the standardization of facilities should enhance plant safety. The rule's primary objectives are: (1) to encourage standardization of future nuclear plants by the use of certified designs, and (2) to permit early and definitive resolution of siting and design safety issues prior to commencement of construction by use of combined construction permits and operating licenses. A combined license would be issued only after pertinent issues, including development of emergency plans, are resolved.

The rule has been structured to provide for public participation in the rulemaking on certified designs and in formal adjudicatory hearings on the combined construction permit and operating license at an early point in the process, before construction begins. A more limited opportunity for postconstruction hearings is also provided if an appropriate showing can be made that the plant has not been constructed in conformance with its acceptance criteria and there are specific operational consequences of nonconformance that would be contrary to assuring adequate protection of the public health and safety.

Certifying Standard Designs

The NRC has received four design certification applications under this new process. The first two applications are for evolutionary versions of existing light water reactor designs. The NRC staff has completed draft safety evaluation reports on both of these evolutionary designs. Although these draft reports include a number of open issues which we and the vendors are working to resolve, almost all the open issues deal with acceptance criteria, not with specific design problems. The other two applications are for novel light water reactor designs which employ passive safety features and modular construction; an initial review of each has begun.

The proposed budget continues to provide adequate resources to develop the independent information and analyses necessary to support our safety decisions on these new and unique designs.

NUCLEAR MATERIALS

Approximately 15 percent of our budget request is devoted to ensuring the safe disposal of nuclear waste and the safe use and transport of nuclear materials. The requested increase in this program is primarily to implement NRC's new responsibilities for certifying the gaseous diffusion uranium enrichment plants to be operated by the United States Enrichment Corporation.

Overseeing Uranium Enrichment

The Energy Policy Act of 1992 places significant new responsibilities on the NRC in the area of uranium enrichment. The Act establishes the United States Enrichment Corporation (USEC) and requires the NRC to certify radiological health and safety protection and adequate safeguards for the two gaseous diffusion uranium enrichment facilities that the Corporation will lease from the Department of Energy (DOE). The Act requires the NRC to develop standards for governing these facilities; to establish a certification process for the Corporation to comply with the standards; to consult with the Environmental Protection Agency (EPA); and to report at least annually to Congress on the status of health, safety, and environmental conditions of the facilities.

The DOE and the NRC agree that the DOE will retain regulatory oversight for the facilities until NRC regulatory standards are in place and we have completed our first certification. We have provided resources to develop standards and to prepare for the transition. The NRC has devoted substantial resources to this project since enactment of the Energy Policy Act of 1992. Beginning July 1, 1993, we will begin charging the USEC fees to recover costs that we incur.

Managing Nuclear Waste

Our responsibilities for the safe transportation, storage, and disposal of nuclear waste were expanded significantly in the 1980's. The NRC became responsible for licensing a high-level waste geologic repository and spent fuel storage casks, and for providing the complete regulatory framework that will assist the states to develop and implement plans for the disposal of low level radioactive waste.

During the past year the Department of Energy has taken some encouraging new approaches to high-level waste management. The DOE recently announced a strategy to address options for spent fuel receipt beginning in 1998. This new strategy includes the use of multi-purpose containers for interim storage, transportation, and final disposal of spent fuel. We have begun consulting with the DOE on the design

requirements for such a container and will review the design when submitted by the DOE for certification.

Our high-level waste efforts continue to keep pace with DOE's program as they proceed with surface-based testing and initiation of underground exploration at the Yucca Mountain site. In March and November 1992, the NRC lifted its two objections to DOE's starting site characterization. Objection 1 dealt with an inadequate design and design control process for the Exploratory Studies Facility, and Objection 2 identified the lack of a qualified quality assurance program for site characterization. In addition, the number of NRC reviews has increased recently in response to DOE activities.

With regard to low-level waste, one of the nation's commercial low-level waste disposal sites ceased disposal operations at the end of 1992, another has restricted access to the Northwest and Rocky Mountain compacts, and the third site is scheduled to close to out-of-compact disposal by July 1, 1994. State legislation, state budget constraints, litigation, and public concern have contributed to delays in establishing new low-level waste disposal sites. However, we do not believe these problems are insurmountable. Progress has been made by states over the last year both in siting and in issue resolution. At the same time, the trend toward lower waste volume has continued to the point where current disposal requirements are only about half of what they were a few years ago.

Decommissioning of Sites

We must be able to ensure that once an operating facility completes its useful life, the site is properly cleaned up. Thus, decommissioning and decontamination are an integral part of the NRC licensing process. We have developed a Site Decommissioning Management Program, creating an enforceable regulatory framework that includes cleanup standards and deadlines to ensure the timely cleanup of NRC regulated sites before licenses are terminated and the sites released for unrestricted use. The Site Decommissioning Management Plan has allowed the NRC to increase its oversight of approximately 45 previously contaminated sites to ensure satisfactory cleanup of low-level waste. Remedial action at two additional sites has been completed recently, allowing these sites to be removed from the Site Decommissioning Management Plan. Substantial cleanup progress has been made at five other sites. I believe we have been effective in communicating to licensees and the public NRC's expectations for timely and effective remediation of these sites.

We are also conducting an enhanced participatory rulemaking to establish standards for residual radioactivity for decommissioned sites. This rulemaking includes workshops around the country in which industry and grassroots environmental groups have come to the same table to discuss the difficult issues associated with these standards. EPA is participating in this effort. We are hopeful that it will result in the generic standards needed to plan and implement future cleanup and decommissioning efforts in a more efficient manner.

Overseeing the Safe Use of Nuclear Materials

The NRC continues to be responsible for ensuring that civilian uses of nuclear materials in the United States are carried out in a way which will adequately protect the public health and safety, the environment, and the national security. The NRC licensees include existing nuclear power reactor operators and others who are primarily users of nuclear materials and fuel cycle facilities.

The NRC regulates a wide variety of nuclear materials licensees across the United States. There are about 22,000 licensed medical, academic, and industrial users of nuclear materials subject to regulation. Of these, approximately 7,000 are licensed directly by the NRC; the other 15,000 are regulated by the 29 states that participate in the NRC Agreement States Program. Nuclear materials are used in large industrial operations such as the manufacture of reactor fuel, in the production of radio pharmaceuticals, in fabrication of consumer products such as smoke detectors, and in operations using small and large quantities of radioisotopes in over seven million medical diagnosis and treatment procedures annually. Given the large and varied use of nuclear materials throughout this country, the overall safety record has been very good. However, we have found some weaknesses.

For example, one of the most important uses of byproduct material is for medical diagnosis and therapy. The last several years have seen increased Commission attention directed at the medical use program. Our regulatory program is directed towards ensuring, in addition to worker and public safety, that the patient receives the dose of radiation or radioactive material that is prescribed by the physician. Occurrences of misadministrations—primarily cases in which radiotherapy as deliv-

ered is different from that which is prescribed—are not common but are cause for concern about the effectiveness of the program.

In September 1992, staff presented a management plan for the medical use program to the Commission. Additionally, we have recently completed an internal management audit to determine how well we are implementing existing programs; we plan to contract for an independent audit to assess the adequacy and appropriateness of the current regulatory framework for medical use of byproduct material. We are also examining the relationship between the Agreement State programs and the NRC-operated program.

We would like to note that the NRC's jurisdiction covers only approximately 25 percent of the radiation therapy treatments. The remainder, which involve identical radiation from different types of sources, are covered under a range of state regulatory programs. It is fair to ask if continuation of the existing scheme is the best way to use limited resources to achieve the goal of protection of the public. So we have been giving some thought to ways to address these issues. In this regard, we have created a task force to examine, among other things, the allocation of responsibilities among federal and state regulatory bodies to meet the nationwide goal of ensuring adequate protection of the radiological health and safety of the public, including patients and health care workers in the medical uses of ionizing radiation.

The task force recommendations will require careful evaluation and coordination before the Commission would be in a position to make a decision on this matter, including any eventual recommendation to Congress for possible revision to our statutory authority. We plan to provide the Congress with an interim report on our efforts to come to grips with these issues by August 6, 1993.

The NRC has also undertaken new initiatives in the regulation of major materials licensees and fuel cycle facilities. Last year, NRC's Materials Regulatory Review Task Force reported its findings and recommendations concerning deficiencies and needed improvements in the licensing and regulation of major materials licensees. The NRC is now responding to those recommendations by developing a better regulatory framework for licensing and inspection. The NRC has also conducted a regulatory impact survey for fuel cycle and major materials licensees to determine the impact of NRC activities on these licensees in order not to impose unnecessary burdens inadvertently.

MANAGEMENT AND SUPPORT

Approximately 30 percent of our budget request is for the day-to-day management of the agency and the normal "housekeeping" costs associated with keeping the agency doors open. However, even in this administrative arena we have assumed significant new responsibilities in the past few years which are putting greater pressures on our available resources. These include establishment of an Inspector General for NRC, increased participation in international nuclear activities, collection of significant additional license fees, implementation of the Chief Financial Officers Act, and consolidation of our headquarters employees.

International Activities

The NRC participates in a number of international nuclear safety and safeguards activities both on a bilateral basis and through multilateral organizations like the International Atomic Energy Agency and the OECD Nuclear Energy Agency. We believe that our cooperative efforts in sharing safety information and operational experience serve to make commercial nuclear power safer throughout the world and enable the NRC to benefit from the advances and experience of nuclear programs in other countries.

Most notable this year are the expanded safety activities with the Republics of the former Soviet Union (FSU) and the countries of Eastern Europe stemming from the diplomatic initiatives at the Munich Summit and in Lisbon. The aid package offered at the Vancouver Summit also includes additional funding for safety assistance to Russian reactors.

In addition to nuclear power plant safety, health and environmental challenges are other potential targets for future aid of the FSU. The NRC is playing a role in the development of a much needed integrated plan for overall assistance.

We are now witnessing the growth of commercial nuclear power in Asian nations such as Japan, Taiwan, and South Korea, where U.S. vendors are actively competing for reactor sales, and the beginning of a new program in Indonesia. The NRC has technical information exchange agreements with 27 different countries; most recently we have concluded an agreement with Indonesia and renewed existing agreements with China and Greece. These agreements provide a framework for bilateral

cooperation on nuclear safety, safeguards, waste management and environmental protection; they help to open up communication channels with foreign nuclear regulatory organizations so that they have the means to create a regulatory environment similar to what we have here in the United States.

License Fees

The NRC is required by the Omnibus Budget Reconciliation Act (OBRA) of 1990 to collect approximately 100 percent of its annual budget from fees. That represents a substantial increase in fees from the previous requirements to collect 45 percent of our annual budget. In FY 1994, the NRC budget will be offset by receipts from license and annual fees estimated at \$525.7 million, with the remaining \$22 million to be appropriated from the Nuclear Waste fund.

To be fair and equitable, the NRC implemented the Act by assessing fees to essentially all of its applicants and licensees. As you may expect, the NRC has received severe criticism and complaints from licensees because of the increase in fees caused by the requirement to recover 100 percent of the budget. We believe these complaints have merit where licensees are being charged for services that do not directly benefit them. For example, the NRC is engaged in a number of international activities, such as assistance to international organizations or countries which support U.S. interests, that have no direct impact on NRC licensees. Nevertheless, the costs of these activities must be recovered through fees assessed to NRC licensees.

We are addressing these and other concerns in response to the Energy Policy Act of 1992 requirement for the NRC to review its policy of assessing annual fees under OBRA-90, solicit public comments on the need to change such policy, and recommend to the Congress such changes in existing law as NRC finds are needed to prevent the placement of an unfair burden on certain licensees. On April 19, 1993, the NRC published a Federal Register Notice that solicits public comments; the comment period expires July 19, 1993. After evaluation of the comments, we will submit a report to Congress, including recommendations for any statutory changes that are needed. I would note, however, that the elimination of some of the concerns will require legislation.

OPENNESS OF NRC'S PROCESSES

A primary NRC responsibility is to ensure integrity, candor, and openness in all our activities. Ensuring openness and candor in our processes cannot be accomplished by public statements alone; it must be incorporated in how the NRC does business at every level. We feel that the NRC has made great strides in keeping the public informed about what we are doing and why, and about successes and shortcomings. We have solicited the participation of the public and have benefited from their contributions. As indicated earlier, the NRC currently has an enhanced participatory rulemaking effort under way to establish radiological criteria for decommissioning materials sites. We are opening some enforcement conferences to the public, we conduct open meetings to discuss each licensee's performance assessment, and the Regional Administrators now hold quarterly briefings for the public and the media.

LEGISLATIVE PROPOSALS

The Commission appreciates the Committee's interest in our seven legislative recommendations. Our statement describes the main aspects of each of the NRC legislative proposals. Six of the proposals would amend provisions of the Atomic Energy Act; the remaining proposal would amend section 206 of the Energy Reorganization Act of 1974. We also address a recent bill introduced by Senator Lieberman relating to enforcement petitions.

1. Enhancing Security at Nuclear Facilities

Ensuring the security of nuclear facilities is one of our important regulatory responsibilities. Three of the proposed amendments to the Atomic Energy Act seek to enhance our ability to protect against the theft of nuclear materials and sabotage of nuclear facilities.

The first proposal would make unauthorized introduction of weapons, explosives, or other dangerous instruments at NRC-licensed facilities a Federal crime. There have been an increasing number of reported incidents where persons without authorization have brought firearms into protected areas of NRC-regulated sites. While the motivations behind these actions appear to have been unrelated to the nature of the facility, these occurrences have highlighted the fact that there is no

federal law that imposes criminal sanctions against a person responsible for bringing a weapon to a nuclear facility.

Enactment of this provision would promote the national policy of maintaining comparable safeguards for similar nuclear materials at DOE-owned and NRC-licensed facilities. Unauthorized introduction of weapons or other dangerous instruments at nuclear facilities owned by the Department of Energy is a crime under the Atomic Energy Act.

The second proposal to enhance nuclear facility security would make sabotage of a nuclear facility during its construction a Federal crime if the action could jeopardize public health and safety during the facility's operation. Sabotage during the later stages of construction could go undetected because the inspections that would have discovered the sabotage might already have occurred. Here, also, there are no applicable criminal sanctions under Federal law.

Finally, we propose an amendment to the Atomic Energy Act to authorize guards at NRC-licensed facilities to carry firearms. Most importantly, the effect of this amendment would be to substitute Federal standards for state standards in determining the appropriateness of guards at these facility using deadly force to prevent theft of nuclear materials capable of being used for nuclear explosives. Currently, state law governs the use of deadly force by guards at NRC-licensed facilities, and it varies significantly; in many jurisdictions, the use of firearms in these circumstances could result in state criminal prosecution.

While this amendment was first proposed because of the need to protect against theft of strategic special nuclear materials, it would apply to any circumstance where successful completion of the crime would present an immediate and direct threat to the health and safety of the public. Recent events have convinced us that there is a broader need for this authority at NRC-licensed facilities. In addition, enactment of this provision would promote the national policy of maintaining comparable safeguards for similar nuclear materials and facilities in the public and private sectors. Guards at DOE facilities already possess this authority.

2. Enhancement of NRC's Investigation and Enforcement Authority

Three of the proposed amendments would enhance NRC's effectiveness in enforcing the statutory provisions that fall under our authority.

We are proposing to amend an Energy Reorganization Act provision that requires the NRC to be notified of defects or regulatory violations at nuclear power plants and other NRC-regulated activities where such defects could create a substantial safety hazard. This notification requirement is now applicable only to individual officers or directors of the business that is involved. Any such individual who knowingly and consciously fails to provide proper notice is subject to a civil penalty. However, it is unclear whether the business entity itself can be penalized or whether a non-licensee is even covered by the rule.

We believe that the business entity should be held responsible, and that it should be accountable whether or not it is an NRC licensee. This view is in accord with the general approach to regulation under the Atomic Energy Act and, experience tells us, would be more effective in deterring future violations of the rule.

In recent years, it has become increasingly apparent that civil monetary penalties should reach all persons who violate NRC requirements, regardless of their status as licensees or non-licensees. For that reason we are also proposing to amend the Atomic Energy Act to make clear that the Commission has the authority to impose civil monetary penalties upon all persons subject to its authority who violate a Commission rule, regulation, or order issued under section 161 b., 161 i, or 161 o of the Act. Express authority for imposition of criminal penalties for most such violations is already provided by the Act.

We also propose an amendment to the Atomic Energy Act to permit the NRC to obtain a judicially-approved, administrative search warrant to inspect the premises of a non-licensee that is not part of the regulated nuclear industry. The warrant would allow the NRC to inspect a firm's premises without prior notice if the NRC reasonably believes that action by that firm may be responsible for a violation that could potentially affect the public health and safety. Requiring use of the subpoena process, as is now the case, poses a high risk of destruction of evidence since notice and an opportunity to contest must be given. The administrative search warrant authority is needed to ensure that suppliers of NRC-licensees will not be able to deny agency investigators access to important information.

3. Elimination of ACRS Report

NRC's Advisory Committee on Reactor Safeguards is currently required to prepare an annual report to Congress on nuclear safety research. The preparation of

the report has not proved to be an effective use of the time of ACRS members and the Commission's limited resources, so we are proposing to eliminate that requirement. Reports on significant nuclear safety research would continue to be provided to our congressional oversight committees under our general statutory responsibility to keep them informed.

4. Enforcement Petitions under 10 CFR 2.206

Enforcement petitions filed with the NRC under 10 CFR 2.206 are an important part of the agency's regulatory process. As part of our effort to assure that licensed facilities are operated in a manner consistent with the public health and safety, it is important that members of the public have a formal mechanism, including the 2.206 process, to bring to the Commission's attention concerns that a facility is not operating in conformity with regulatory requirements or that additional requirements need to be imposed to protect the public health and safety.

While the Commission's review of 2.206 petitions is quite thorough, the Commission recognizes that there could be some improvements in the process. On December 18, 1992 the Commission's General Counsel recommended that a workshop be held at which members of citizen's groups, state and local governments, the nuclear industry, and other interested members of the public could provide their views on how the 2.206 process could be improved. The Commission adopted that recommendation on March 23, 1993, and a workshop will be held on July 28, 1993. We would expect the 2.206 process to be thoroughly reviewed and commented upon at that workshop. A result of the workshop could be changes to NRC regulations and practices.

The decision whether to take an enforcement action in a given case is inherently a discretionary decision vested in the agency. The agency must weigh various concerns including, but not limited to, the safety significance of the matter raised, the licensee's action in response to the underlying issues or the violations raised in the petition, past problems with the licensee, the availability of effective remedies and NRC resources. Courts have long recognized that decisions whether to prosecute are discretionary and generally should not be subject to judicial review. This culminated in the Supreme Court decision, *Heckler v. Chaney*, which held that absent clear, legally mandated standards on how enforcement discretion would be exercised, federal agency enforcement decisions are not subject to judicial review. The draft bill S. 1165 would have the effect of removing the NRC from the scope of the Supreme Court decision. If the Congress were to reexamine the basic question of judicial review of enforcement decisions we would expect to be included, but we do not see the reason to be singled out, since we bear our responsibilities seriously.

The NRC carefully reviews each petition, fully develops the facts, and provides a detailed written response from a senior agency official with responsibility for the issues raised. Prior to the *Heckler v. Chaney* decision, fewer than ten cases were brought challenging agency 2.206 decisions, and the NRC enforcement decision was upheld in each of those cases.

Under the circumstances, the Commission does not believe that the proposed legislation, the Nuclear Enforcement Accountability Act of 1993, would produce benefits and, in fact, it would remove necessary discretion. Accordingly, we would not support the proposed legislation. We hope that our independent efforts, including the July 28 workshop will produce any needed improvements in the 2.206 process.

FISCAL YEARS 1994-1995 AUTHORIZATION

Our fiscal year 1994 budget request is \$547.7 million, an increase of \$7.7 million above fiscal year 1993—less than a 2% increase. Our fiscal year 1995 budget estimate is \$551.8 million, less than a 1% increase above our request for fiscal year 1994.

Well before submitting our request to OMB, we undertook a comprehensive, thorough review of our programs. This review resulted in a streamlined budget request at less than the rate of inflation even as we undertake new responsibilities. We are budgeting increased resources to keep pace with industry activities associated with reactor license renewal and the safety reviews and inspections associated with issuing new power reactor licenses, and within our management and support program we have requested funds to strengthen our financial management systems, where recent IG reports have indicated the need for improvement.

In addition there are programmatic increases needed to fund some of our new responsibilities for regulating the United States Enrichment Corporation's facilities, as required by the Energy Policy Act. However, we found that by following the policy described earlier, we could make offsetting reductions in current operations and in reactor research without compromising our safety responsibilities. This

budget request complies with the Administration's Executive Orders and cost-cutting initiatives.

The NRC continues its efforts to identify better ways to accomplish our mission. These efforts will allow us to respond to future needs while minimizing the growth in resource requirements. For example, the Commission has determined that changes in workload will allow for the closing of the Uranium Recovery Field Office in Denver, Colorado. The work that is currently performed in that office is expected to decrease and the remainder will be carried out by personnel in our Dallas, Texas, regional office as well as by staff in headquarters. This action will result in savings to the agency while continuing the appropriate level of effort in this area. Also, we currently have under review the possible consolidation of our Western and South West regions. The review has been undertaken in recognition of the changing workload as the number of reactors and licensees have declined in the West. These reviews help to ensure the best application of available resources and will help us in our effort to meet the Administration's goals for continued resource reductions.

CONCLUSION

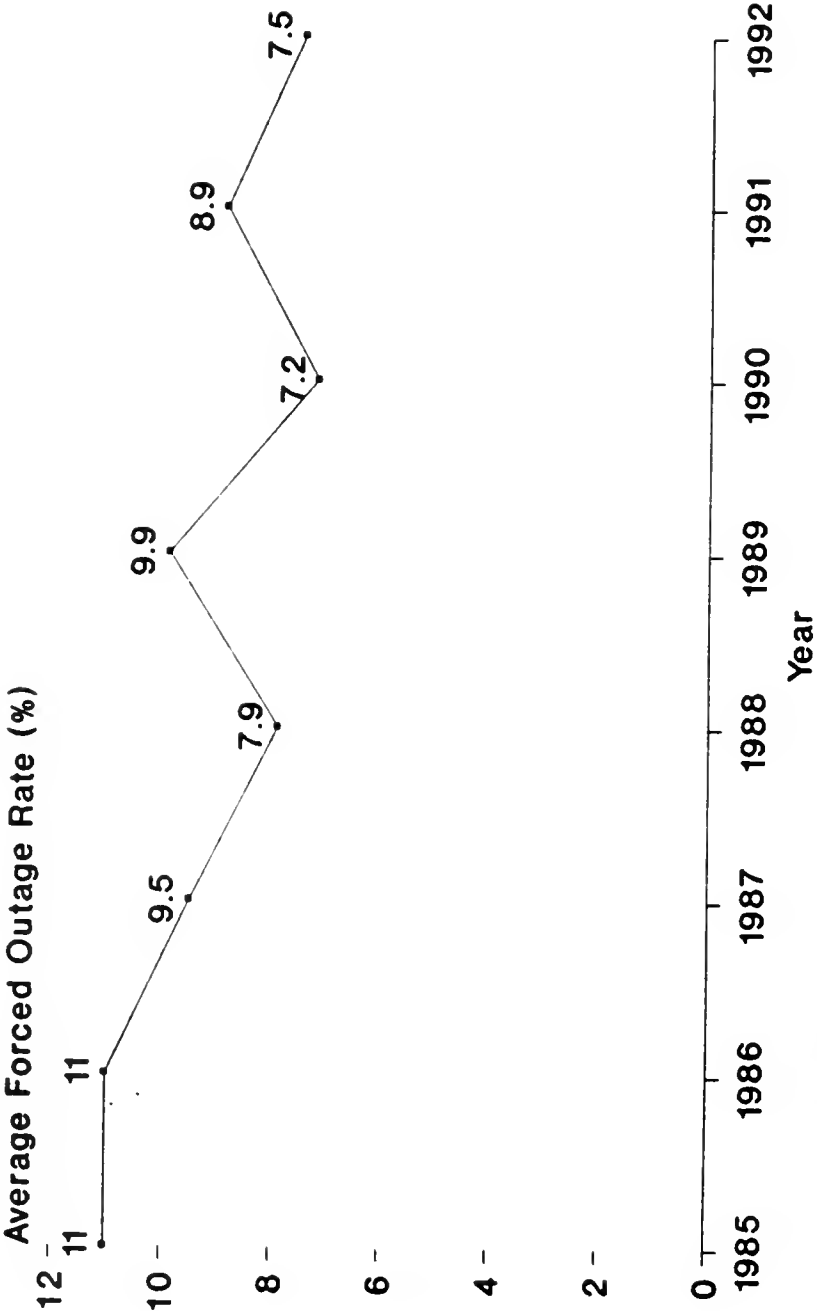
In conclusion, I would like to reiterate that the NRC is committed to meeting its responsibilities for the safety of today's operating reactors and other NRC licensed activities. We have tried to stay a step ahead of events; by so doing we have been able to undertake additional responsibilities and invest in those programs which affect the future—streamlining the regulatory process, renewing reactor licenses, certifying standard reactor designs, and managing waste disposal—while slightly reducing our budget in real terms. We will continue to do all of this in a manner that facilitates public understanding of our regulatory process.

The details of our budget request for fiscal year 1994 and budget estimate for fiscal year 1995 have been provided to your Committee. The request and estimate are included as an appendix to this statement, and are summarized in two charts: Chart 4 summarizes our budget in terms of NRC's principal program objectives and illustrates changes to our program requirements and Chart 5 depicts a gross allocation of resources to our two principal programs.

In the Commission's view this program is necessary to ensure effective regulation of an industry which touches virtually every facet of American life.

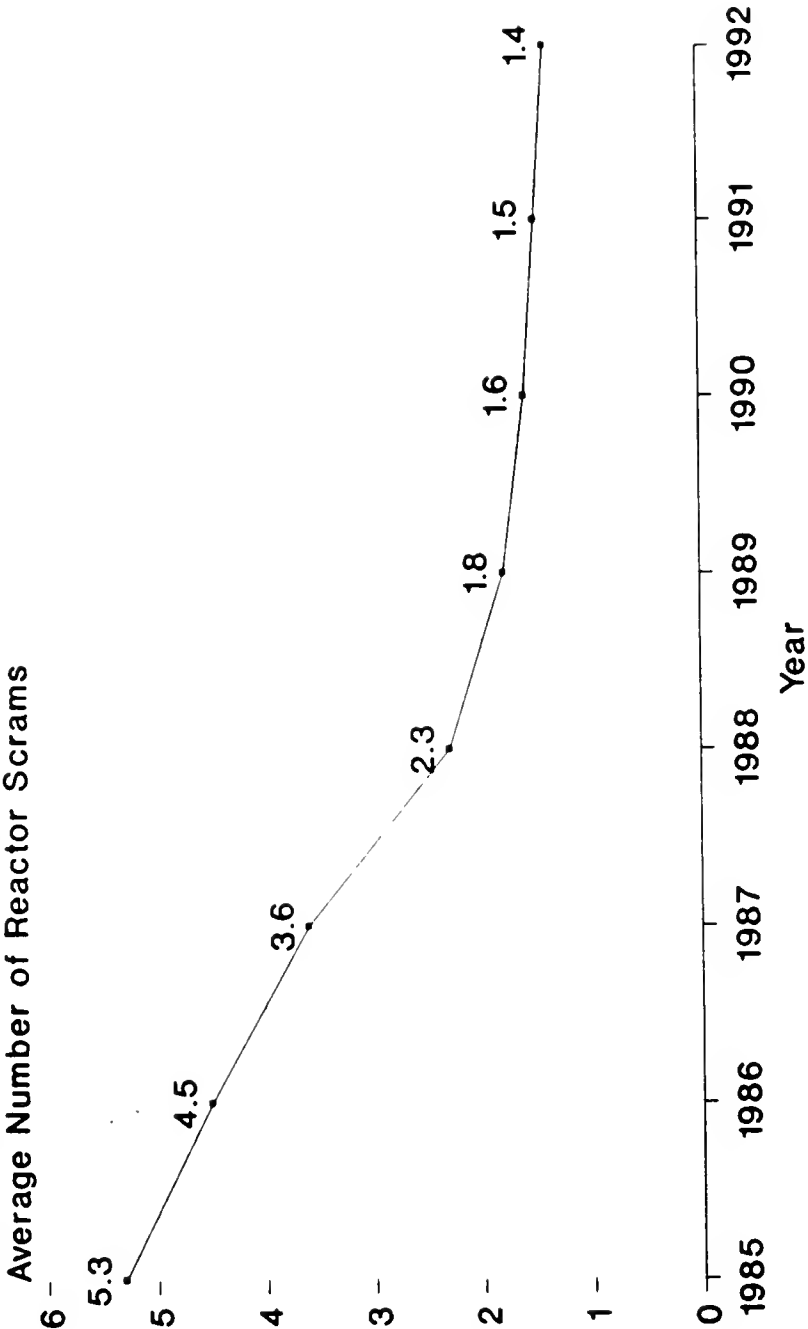
Mr. Chairman, this concludes our prepared statement. My fellow Commissioners and I will be pleased to answer any questions that you and the Subcommittee may have.

Forced Outage Rate
Annual Industry Averages
1985 - 1992



Note: Excludes plants in extended shutdown.

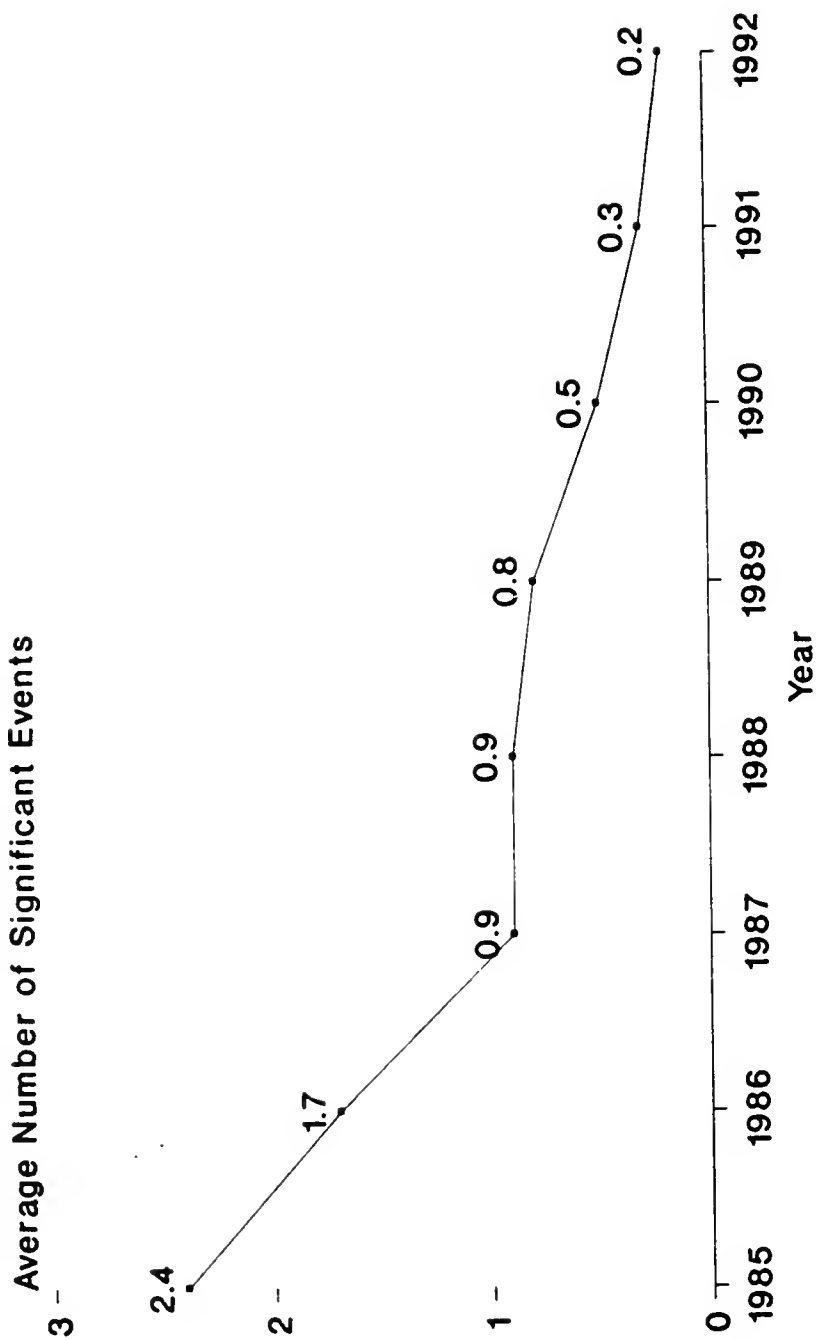
Automatic Scrams While Critical
Annual Industry Averages
1985 - 1992



Note: Excludes plants in extended shutdown.

Chart 2

Significant Events
Annual Industry Averages
1985 - 1992



Note: Excludes plants in extended shutdown.

Chart 3

U.S. NUCLEAR REGULATORY COMMISSION
BUDGET SUMMARY
(Dollars in Millions)

	FY 1994 Budget			FY 1995 Budget Estimate
	FY 1993 Base	Current Services	Program Requirements	Net Budget
REACTOR REGULATORY PROGRAMS				
Reactor Safety and Safeguards Regulation	\$163.0	\$5.1	-\$4.3	\$163.8
Reactor Safety Research	100.6	2.7	-3.3	98.3
Reactor Special and Independent Reviews, Investigations, and Enforcement	<u>31.0</u>	<u>.9</u>	<u>-.9</u>	<u>31.4</u>
Subtotal	\$294.6	\$8.7	-\$8.5	\$297.7
NUCLEAR MATERIALS REGULATORY PROGRAMS				
Nuclear Material and Low Level Waste Safety and Safeguards Regulation	\$57.6	\$1.9	\$2.4	\$61.9
High-Level Nuclear Waste Regulation	<u>21.1</u>	<u>.5</u>	<u>.4</u>	<u>22.0</u>
Subtotal	\$78.7	\$2.4	\$2.8	\$85.0
MANAGEMENT AND SUPPORT				
Nuclear Safety Management and Support	\$162.1	\$9.7	-\$7.6	\$164.1
Inspector General	<u>4.6</u>	<u>-.1</u>	<u>-.1</u>	<u>5.0</u>
Subtotal	\$166.7	\$9.8	-\$7.5	\$169.1
TOTAL	<u>\$540.0</u>	<u>\$20.9</u>	<u>-\$13.2</u>	<u>\$551.8</u>

U.S. NUCLEAR REGULATORY COMMISSION
BUDGET SUMMARY
(Dollars in Millions)

	FY 1994 Budget		FY 1995 Budget Estimate	
	Amount	Percent	Amount	Percent
REACTOR BUDGET				
Reactor Regulatory Programs	\$294.8	54	\$297.7	54
Management and Support*	<u>131.6</u>	<u>24</u>	<u>131.5</u>	<u>24</u>
Subtotal	\$426.4	78	\$429.2	78
NUCLEAR MATERIALS BUDGET				
Nuclear Materials Regulatory Programs	\$83.9	15	\$85.0	15
Management and Support*	<u>37.4</u>	<u>7</u>	<u>37.6</u>	<u>7</u>
Subtotal	\$121.3	22	\$122.6	22
TOTAL	<u>\$547.7</u>	<u>100</u>	<u>\$551.8</u>	<u>100</u>

*Assigned portion



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 23, 1993

The Honorable Joseph I. Lieberman, Chairman
Subcommittee on Clean Air and Nuclear Regulation
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

In response to your letter dated July 29, 1993, enclosed are responses to questions you provided for the record for the Subcommittee's June 30, 1993, hearing on the Nuclear Regulatory Commission's proposed authorization bill for fiscal years 1994 and 1995 and associated legislative proposals.

Sincerely,

A handwritten signature in black ink, reading "Dennis K. Rathbun", is positioned above the typed name.

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosures:
As Stated

QUESTION 1 (a).

Section 8 of the NRC's legislative proposal would provide the NRC with authority to conduct warrantless searches of applicants for a NRC license, NRC licensees, and persons who sell nuclear equipment to NRC licensees.

To what extent does NRC already have such authority?

ANSWER.

NRC already has the authority to conduct warrantless searches of the premises of applicants, licensees, and other persons subject to section 206 of the Energy Reorganization Act. The proposed section 161 c.(1)(C) of the Atomic Energy Act (contained in section 8 of S. 1166), on conduct of searches of premises of such persons, expressly provides such authority only in order to avoid any contrary implication being drawn from the addition of the new language contained in section 161 c.(1)(D).

QUESTION 1 (b). To what extent would this legislation provide the NRC with additional authority, and why is this additional authority necessary?

ANSWER.

Currently, NRC can obtain information from a party that is not part of the pervasively regulated nuclear industry only by subpoena or through a warrantless search if the party consents to inspection. An administrative search warrant cannot be obtained to inspect the premises of such a party because federal courts have held that, absent explicit statutory authority, an administrative warrant may not be obtained if Congress has granted subpoena power to an agency. Use of the subpoena process, where notice and an opportunity to contest must be given, poses a high risk of destruction of evidence.

The amendment proposed by section 8 of NRC's legislative proposal would provide new authority for the NRC to obtain judicially-approved, administrative warrants for the purpose of searching the premises of firms that are not part of the pervasively regulated nuclear industry. Such a warrant could only be used when the NRC reasonably believes that actions by the firm may be responsible for a regulatory violation which could potentially affect the public health and safety. The Commission believes this authority would be extremely useful in our efforts to investigate allegations that a firm which is not part of the pervasively regulated industry is manufacturing defective products that are being supplied to the nuclear industry.

QUESTION 1 (c).

What other federal agencies have authority to conduct warrantless searches, and under which circumstances?

ANSWER.

A number of Federal agencies have general inspection authority with respect to the industry they regulate, including the Food and Drug Administration (FDA), the Mine Safety and Health Administration (MSHA), the Occupational Safety and Health Administration (OSHA), and the Consumer Product Safety Commission (CPSC). Practices with respect to obtaining search warrants for inspections vary among these agencies. For example, most inspections carried out by FDA pursuant to its inspection authority are without a warrant, though warrants are obtained when a refusal of entry is anticipated. This is a common approach among agencies with inspection authority. However, MSHA does not use warrants at all, a practice that was approved in Donovan v. Dewey, 452 U.S. 594 (1981). (In exploring the parameters of warrantless searches in the Donovan case, which arose under the Federal Mine Safety & Health Act of 1977, the Supreme Court indicated that it would find an argument that the nuclear power industry could not be subject to warrantless searches to be absurd.)

QUESTION 2 (a).

In the 1970's prior to Heckler v. Chaney, the NRC adopted a substantive standard for determining when to grant section 2.206 petitions. Under the standard adopted in a case involving the Indian Point reactor, and then later affirmed in a case involving the proposed Baily nuclear power plant, the NRC stated that the standard to be applied in determining whether to grant a section 2.206 petition was whether the petition had raised a substantial health or safety issue. In 1985, in Florida Power & Light v. Lorion, the Supreme Court stated that the NRC "interprets §2.206 as requiring issuance of an order to show cause when a citizen petition raises 'substantial health or safety issues.'"

On April 23, 1993, the staff partially responded to a section 2.206 petition filed with respect to the operation of the Vogtle nuclear plant (this staff partial response was vacated by the Commission on July 14, 1993). On page 53 of the response, the staff stated that "The institution of proceedings in accordance with 10 CFR 2.206, as requested by Petitioners, is appropriate only where substantial health and safety issues have been raised."

QUESTION 2 (a) (continued)

2

(a) Under current NRC practice, if a section 2.206 petition raises a substantial health or safety issue, will the NRC issue an order to show cause? Since the Lorion decision, has the Commission repealed or altered the "substantial health or safety issue" standard for determining whether to grant a section 2.206 petition? If so, when, and how was this standard changed?

ANSWER.

Under the current NRC practice, if a section 2.206 petition were to raise a substantial health or safety issue, whether the NRC would issue an order or a demand for information would depend on the particular circumstances. If the licensee of the facility where the safety issues existed was not already addressing or did not promptly agree to address the issue to the satisfaction of the Commission (in terms of substance, scope, and timeliness), then the Commission would issue an appropriate order. If, however, the safety issue already were being satisfactorily addressed by the licensee, an order might not be necessary. If the petition raised a generic safety issue and the Commission determined that immediate action was not necessary to protect the public health and safety or that licensees were taking appropriate corrective action, then the Commission would consider whether it should initiate a rulemaking proceeding or take other appropriate action, such as issuance of a bulletin, a generic letter, or industry notification.

QUESTION 2 (a) (continued)

3

The Commission has not repealed or altered in any respect the "substantial health or safety issue" standard for determining whether to grant a section 2.206 petition since the Lorion decision. However, as indicated in the previous paragraph, when a "substantial health or safety issue" is raised, an important consideration is determining whether some immediate action is necessary to address the issue.

QUESTION 2 (b).

Would the NRC have any objection to the use of this standard to govern its review of section 2.206 petitions? If the NRC objects to the use of this standard, please explain why the NRC formerly believed this standard was appropriate, but now believes it is not appropriate.

ANSWER.

The Commission continues to believe that use of the "substantial health or safety issue" standard is appropriate in review of section 2.206 petitions, but would object to having this standard made the sole and exclusive test for determining whether to grant such petitions. As we have indicated in answer to question 2(a), even if the Commission determines that a petition has raised a substantial health and safety issue, there may still be reasons why the Commission might decide not to initiate a proceeding or issue an enforcement order against the licensee. In dealing with section 2.206 petitions, the Commission needs the flexibility to consider not only whether "substantial health or safety issues" has been raised, but also whether the action requested by the petitioner is the appropriate response.

QUESTION 2 (c).

Why shouldn't this standard be applied as a substantive standard that would be reviewable under a deferential standard of review in the Court of Appeals?

ANSWER.

For the reasons discussed in our answers to questions 2(a) and 2(b), the disposition of section 2.206 petitions does not depend solely on application of the "substantial health or safety issue" standard. Therefore, this standard does not, in the Commission's view, provide a sufficient basis for Court of Appeals review of 2.206 denials. The Commission's enforcement decisions are, as are those of other agencies, inherently discretionary, requiring the Commission's best judgment as to how to utilize most effectively its limited resources to regulate its licensees. These decisions are invariably case-specific, highly dependent on the unique circumstances of each case in light of the Commission's other concurrent priorities, and are not susceptible to any formula or standard. There are no obvious standards by which a court could review the exercise of the Commission's discretion in determining what action should be taken, once a "substantial health or safety issue" has been identified. For this reason, the Commission believes that the judicial decisions holding 2.206 denials to be unreviewable are sound.

QUESTION 2 (d).

Strictly speaking, S. 1165 would not provide for judicial review of NRC decisions not to take enforcement actions--it would only provide judicial review of NRC decisions not to institute a show cause proceeding. What is the Commission's objection to the institution of a show cause proceeding if the petitioner has demonstrated that there is a substantial health or safety issue? Why would the Commission not institute a show cause proceeding under such circumstances?

ANSWER.

The Commission has no objection to issuing a show cause or other appropriate order, in response to section 2.206 petition that has demonstrated that there is a substantial health or safety issue, if such an order is necessary to require a licensee to satisfactorily address the issue. If, however, the licensee already is addressing the safety issue to the satisfaction of the Commission, or if informal means are effective to obtain licensee action, then an order may not be necessary.

There are several reasons why the Commission might not issue an order in response to a substantial health or safety issue demonstrated in a section 2.206 petition. First, it should be emphasized that the Commission has never hesitated to issue an appropriate order when necessary to address substantial health or safety issues. If, however, a licensee is satisfactorily addressing

QUESTION 2 (d) (Continued)

2

a safety issue without the Commission having issued an order, then there is no health or safety goal to be served by the issuance of an order, since the licensee already is doing what the order would have required it to do.

If the order were issued after the licensee agreed to do that which the order would require, then such an order would be confirmatory and the licensee would have no right to a hearing since it had already agreed to the action. In addition, it would be unlikely that anyone else would be adversely affected by such an order to improve safety so as to warrant a hearing after the order was issued. If a hearing were to be held before the order became effective, this could serve as a substantial disincentive to the licensee to agree to the safety improvements required by NRC's proposed order.

While the Commission could grant a discretionary hearing on such an order, consideration would have to be given to resource implications, which could perhaps result in shifting resources away from other safety issues that warrant attention in order to devote those resources to a hearing on an issue which in NRC's view is being adequately addressed. The Commission continues to believe that it should assign its limited resources to those health and safety issues that warrant attention based on their substantive significance, unsatisfactory response by licensees, or other reasons where it is necessary for the Commission to compel appropriate action to address a problem.

QUESTION 2 (e).

Without a substantive standard, how can the NRC determine whether to grant or deny a section 2.206 petition? How can a petitioner know what to include in the petition if the NRC does not specify a substantive standard to govern its review of such petitions?

The substantive standard--"substantial health or safety issue"--relates to whether action would be warranted to bring a licensee into compliance with NRC requirements or to address a health or safety issue. This standard is used regardless of whether there is a violation of requirements or whether the licensee has already taken, or is in the process of taking, appropriate corrective actions to address the violation or health or safety issue.

This substantive standard does not dictate the particular action the Commission may take in response to identification of such an issue. The Commission's enforcement decisions are, as are those of other agencies, inherently discretionary, requiring the Commission's best judgment as to how to utilize most effectively its limited resources to regulate its licensees. These decisions are invariably case-specific, highly dependent on the unique circumstances of each case in light of the Commission's other concurrent priorities, and are not susceptible to any formula or standard. For these and similar reasons, the Supreme Court, in Heckler v. Chaney, held that such agency decisions are committed to agency discretion and are not judicially reviewable.

QUESTION 2 (e) (Continued)

2

Under section 2.206, a petitioner need only request some specific enforcement-type action and set forth the facts that the petitioner believes constitute the basis for the requested action. The petitioner need not "demonstrate" that there is a substantial health or safety issue. Rather, if the petition alleges a substantial health or safety issue or a set of facts that, upon evaluation, the Commission determines constitute a substantial health or safety issue, or some issue of lesser safety significance which still requires remedial action (e.g., a violation of requirements that does not rise to the level of a substantial health or safety issue), then the Commission uses the guidance in its Enforcement Policy, 10 C.F.R. Part 2, Appendix C, to determine how best to exercise its enforcement authority and discretion to address the problem.

QUESTION 3 (a).

Section 2 of S. 1166, the NRC's legislative proposal, imposes a requirement upon firms in addition to responsible officers and directors of such firms, as under current law, to notify the NRC of defects in components and of substantial safety hazards.

(a) The legislative memorandum in support of this proposal states that "The Commission has determined that the purposes of section 206 can best be fulfilled if the business involved, rather than an individual, is primarily responsible for compliance with the Commission's regulations delineating the firm's responsibility."

Please explain why the Commission believes this. Would it be easier to enforce this section against firms rather than responsible officers and directors? Under current authority, has the Commission been reluctant to issue civil penalties for failures to notify? If there have been any examples of instances where the NRC would have issued a civil penalty if the statute had been written as the Commission is now proposing, please provide such examples.

ANSWER.

Though individuals may be penalized for violations of requirements of the Atomic Energy Act, the expectation is that in most cases any enforcement action would be taken against the applicant or licensee business. Section 206 of the Energy Reorganization Act is the only provision falling within NRC's regulatory purview that provides for civil sanctions against individual directors and responsible officers without also providing explicit authority to penalize the business entity itself; usually it is the licensee that is ultimately accountable. The amendment proposed by section 2 of NRC's legislative proposal would shift reporting emphasis from the individual to the business entity with respect to reporting requirements regarding defects in or regulatory violations associated with a basic component the entity provides to a NRC-regulated facility or activity. Though the agency would retain authority to impose penalties on individual directors and responsible officers, they would be subject to civil penalties only if they have actual knowledge of the reporting requirements, as well as the defect or failure to comply. The element of knowledge would not have to be established in order to impose a civil penalty on a business that fails to make a required report.

A primary purpose of imposing civil penalties is to increase the likelihood that actions necessary to protect the public health and safety will be identified and reported and that corrective action will be taken. To achieve this goal, business entities themselves must maintain a work environment and practice that encourage all individuals who are instrumental in a business's management and operation to make such reports, regardless of which individuals

QUESTION 3 (a) (continued)

3

control the business at any particular time. NRC believes that this can best be accomplished by making the business the primary subject of the section 206 reporting requirement.

The proposed amendment of section 206 imposes a strict standard on business entities with respect to reporting of defects. This means that it will be easier to enforce this section against a business than its officers and directors, since a higher threshold is provided for imposing penalties on individuals. We believe this to be an improvement over the present law. For example, under current section 206, if we cannot prove that a defect has been brought to an officer's attention, the officer cannot be held liable. Since the officer's business entity cannot be held liable under section 206, this means that it may not be possible to impose a civil penalty on anyone for the failure to report the defect or regulatory violation. Under the proposed amendment, it will be possible to impose a civil penalty on the business entity without specifically proving knowledge of the defect by a responsible officer or director.

Thus, the problem is not that the Commission has been reluctant to issue civil penalties for failures to notify, but rather that the business is insulated against being assessed a civil penalty and, in many instances, it is difficult to prove that an individual director or responsible office was actually aware of a defect. Examples of cases where a civil penalty would have been issued if sanctions could have been imposed against the firm are provided in the answer to question 3(e).

QUESTION 3 (b).

The legislative memorandum also states that "Under this proposed amendment of section 206, directors and responsible officers of businesses would be subject to civil penalties only if they have actual knowledge of the reporting requirement imposed by section 206, as well as the defect or failure to comply with the Atomic Energy Act or the applicable NRC rule, regulation, order, or license. This standard of liability is not intended to be different from that imposed on such individuals under the current law. However, under the amendment, the element of knowledge will not have to be established in order to impose a civil penalty on a business that fails to make a required report."

The NRC's interpretation of current law--that actual knowledge of the reporting requirement of section 206 is a necessary element of a violation of section 206--appears contrary to the maxim that ignorance of the law is no excuse. It also appears contrary to the Supreme Court's holdings in interpreting criminal statutes (which typically require more of a mental element than civil violations) that, even when a violation must be committed "knowingly," knowledge of the law is not a necessary element of a criminal violation where dangerous materials are involved and

there is a high probability of regulation. For example, in United States v. International Materials & Chemicals Corporation, 402 U.S. 558, 565 (1971), the Supreme Court held that where "dangerous or deleterious devices or products or obnoxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them or dealing with them must be presumed to be aware of the regulation." See also Morissette v. United States, 342 U. S. 246 (1952).

Why does the NRC believe that current law requires knowledge of the reporting requirements for a violation?

ANSWER.

When the Energy Reorganization Act of 1974 was under consideration by the Congress, the predecessor of section 206 originally appeared only in the Senate bill, and it provided both civil and criminal penalties for failure to report defects. The report of the proceedings of the Conference Committee demonstrates that Representative Holifield, co-chairman of the Committee, had serious reservations about the provision as it appeared in the Senate bill. Among other things, he was concerned that the provision would be too hard on the individuals affected. Part of the compromise was to eliminate the criminal penalty, and to modify the language of the civil penalty provision.

The suggested modification of the civil penalty provision proposed by the Administration and accepted by Representative Holifield would have inserted the phrase "knowingly and willfully" in the provision, but as the proceedings moved along this language evolved into "knowingly and consciously," which phrase was described by Representative Holifield as "protective words." See Joint Conference Committee Proceedings on the Energy Reorganization Act of 1974, H.R. 11510, 93rd Congress, 2nd Session, 30-37, 131-132 (October 2, 1974). The Conference Report itself explained that "consciously" was substituted for "willfully" because the latter term is "more applicable to a criminal act," but did not discuss the meaning of either term. See Senate Rep. No. 93-1252, 93d Congress, 2d Session, 36-37 (October 9, 1974). (Congress used "knowingly and willfully" as the standard when, in 1980, it added the criminal penalty provision of section 223 b. of the Atomic Energy Act.)

There is no judicial interpretation of the elements necessary for imposition of a violation under section 206. Looking at other areas of law, one finds that while the courts generally do hold that successful prosecution of a violation of law does not require proof that the violator was aware of the law, this view is not without exception. There has, for example, been considerable deviation from the general rule in tax cases. See Cheek v. United States, 111 S. Ct. 604 (1991). In addition, there is a split in the circuits regarding the need to prove actual knowledge of the law in cases of forfeiture for failure to report export of currency from the United States. Compare United States v. One Lot of Twenty-Four Thousand Nine Hundred Dollars

in U.S. Currency, 770 F.2d 1530 (11th Cir. 1985), with United States v.
\$359,500 in United States Currency, 828 F.2d 930 (3rd Cir. 1992).

Black's Law Dictionary (5th ed.) does not contain a definition of "knowingly and consciously," but it does define "knowingly" and "knowingly and willfully." Briefly, these definitions indicate that the phrase "knowingly and willfully" means with awareness of the nature of the conduct and with intent to commit the conduct. In light of the fact that "knowingly and consciously" was deliberately substituted for "knowingly and willfully" by the conference committee, it is not unreasonable to assume that "knowingly and consciously," as used in section 206, has some nuance of meaning different from "knowingly and willfully." In other words, something is intended other than, or in addition to, awareness of conduct and intent to do wrong. We believe that this difference may be interpreted to be the addition of awareness of the legal requirement that pertains to the circumstances.

In light of the above, the NRC believes that the position that an individual's civil liability should be predicated on proof that the individual was aware of the statutory duty to report reflects a permissible reading of the existing statute, although a contrary position would also be reasonable. (For information regarding the history of NRC interpretation on this point, see the answer to question 3(d).)

QUESTION 3 (c).

Why does the NRC interpret section 206, for civil violations, to require a mental element that the Supreme Court has held is not even necessary to establish criminal liability for a "knowing" violation of regulations dealing with other dangerous materials?

ANSWER.

The above-discussed summarizes the reasoning behind the interpretation that knowledge of the reporting requirement is an element necessary to establishing civil liability of individual directors and responsible officers under current section 206. (This reasoning only applies to section 206 and should not be interpreted as necessarily applicable anywhere else.)

QUESTION 3 (d).

Has the NRC's Office of General Counsel done a legal analysis of this issue? If so, please provide the Subcommittee with this legal analysis.

ANSWER.

A search of the files of NRC's Office of General Counsel has not revealed any separate, written analysis of this issue reflecting the above discussion. However, the enclosed analysis of the issue was prepared by a staff attorney (Mr. Dan Berkovitz) in the Office of the General Counsel, in connection with a December 5, 1983 memorandum from James A. Fitzgerald, Assistant General Counsel, to Ben B. Hayes, Director, Office of Investigations, responding to questions raised regarding legal implications of investigations that had been undertaken by the Office of Investigations. As can be seen from the enclosure, that analysis concluded that a person who knows of a fact required to be reported under section 206 and who fails to make the report may be subject to a civil penalty, regardless whether that person knows of the reporting requirement itself.

The views of the then Office of the Executive Legal Director (OELD), which was charged with providing legal advice to the NRC staff at the time, were contrary to the conclusion reached in the 1983 memorandum. (OELD was disestablished on July 1, 1986.) Though it appears that OELD's views were never set forth in any written legal analysis of the subject, they became the informal operative interpretation for the agency staff. This interpretation has not proved to be an impediment to enforcement action. A review of agency

files of the last several years has not revealed any instance in which an individual director or responsible officer knew of a defect, but failed to make a necessary report because of a lack of knowledge of the section 206 reporting requirement. Typically, proving knowledge of the defect itself is the biggest stumbling block.

The 1983 analysis reveals the paucity of direct authority with respect to the elements that have to be established for a section 206 violation. While all of this may be of some academic and theoretical interest, the best means to resolve any uncertainties is for Congress to enact NRC's proposed amendments to section 206. The immediate issues raised by the NRC proposal are whether the legal liability imposed by section 206 should be extended to business entities, what elements should be required to establish the liability of such entities, and what distinctions, if any, should be drawn between the elements required to establish liability of individuals and liability of business entities. Our answers to these questions are incorporated in the proposed amendment.

Enclosure: As Stated

QUESTION 4

Is knowledge of the notice requirement of section 206(a) of the Energy Reorganization Act or 10 C.F.R. Part 21 a necessary element for a "knowing and conscious" failure to provide that notice?

Under section 206(a) of the Energy Reorganization Act, "[a]ny person who knowingly and consciously fails to provide the notice required by subsection (a) shall be subject to a civil penalty" 42 U.S.C. 5846. 10 C.F.R. 21.61 - - similarly states that "[a]ny director or responsible officer ... who knowingly and consciously fails to provide the notice required by § 21.21 shall be subject to a civil penalty" Neither the statute nor the regulation define "knowing and conscious."

Region IV has stated that knowledge of the statute is necessary. See Memo for Ben B. Hayes from John T. Collins, October 31, 1983. Presumably, this view is based on the argument that a person cannot "knowingly and consciously" fail to provide notice unless that person knows that notice is required.

This interpretation runs afoul of the maxim that ignorance of the law is no excuse. It also emasculates the enforceability of the reporting requirements of section 206. No actions could be brought unless knowledge of section 206

were proved, and, for violations of section 206(a)(1), which requires the reporting of non-compliance with the Atomic Energy Act or the Commission's regulations, it would require proof of knowledge of the applicable section of the Atomic Energy Act or the Commission's regulations. Proof of the latter mental element would be virtually impossible.

It is unlikely that Congress would draft a statute with such difficulties. Indeed, general principles of statutory construction, the legislative history of the statute, and the case law demonstrate that "knowing and conscious" refers to knowledge of the facts required to be reported and not to knowledge of the reporting requirement.

A. General Principles Of Statutory Construction

The word "knowingly," as part of the statutory definition of a criminal offense, has no single fixed and uniform meaning. A determination of its meaning rests on the character of the offense charged. "Knowingly" is sometimes construed in the sense of "intentionally" in which case it must be made to appear that the party charged was aware of the illegality of his conduct. However, the more usual construction is that it does not require knowledge of the act's unlawfulness, but merely knowledge of those facts which are essential to make it unlawful.

21 Am. Jur. 2d, Criminal Law § 136, 270 (1961).

Criminal statutes typically require some mental element. Sae generally LaFave & Scott, Criminal Law (1972).¹¹ Statutes imposing civil penalties typically do not contain such a requirement. Thus, although the above analysis is for criminal statutes, an interpretation of a term in criminal statutes so as not to require a certain mental element applies with at least equal force to that same term when found in a civil statute. As a general matter of statutory construction, therefore, "knowingly" as used in section 206 of the ERA should be interpreted to require knowledge of the facts to be reported rather than knowledge of the act's unlawfulness.

B. Legislative History

Congress modeled the reporting requirements of section 206 after those of the Consumer Product Safety Act (CPSA), 15 U.S.C. §§ 2064-2069. S. Rep. No. 93-980, 93d Cong., 2d Sess. 70 (1974). The CPSA requires every manufacturer or

¹¹This requirement usually is expressed in terms of mens rea or "criminal intent." Criminal intent usually does not require knowledge of the illegality of the act. LaFave & Scott, supra, at 362. For a "public welfare offense" such as violation of an NRC regulation criminal intent need not be required at all. See Morissette v. United States, 342 U.S. 246 (1952).

distributor of a consumer product to notify the Consumer Product Safety Commission (CPSC) if it obtains information reasonably indicating that the product: (1) fails to comply with a consumer product safety rule; or (2) contains a defect that could create a substantial product hazard. 15 U.S.C. 2064(b). Any person who "knowingly" violates this requirement is subject to a civil penalty. 15 U.S.C. 2069(a).

"Knowingly" is defined in 15 U.S.C. 2069(d) as "(1) the having of actual knowledge, or (2) the presumed having of knowledge deemed to be possessed by a reasonable man who acts in the circumstances, including knowledge obtainable upon the exercise of due care to ascertain the truth of representations." This indicates that "knowingly" refers to the knowledge of what is required to be reported rather than of the reporting requirement. The definition speaks of knowledge of "truth of representations" and of knowledge "possessed by a reasonable man who acts in the circumstances." This is knowledge of facts rather than law.¹² There is no reference to knowledge of the law.

¹² A reasonable man is presumed to know the law.

In addition, the CPSA statutory scheme implies that knowledge of the CPSA is not required for a violation of the reporting requirement. The CPSA makes it unlawful, inter alia, for any person to manufacture or sell consumer products that are not in conformance with applicable safety standards or that have been banned. 15 U.S.C. 2068(a)(1), (2). Any person who knowingly violates these requirements is subject to civil penalties. 15 U.S.C. 2069. The second sentence of section 2069(a)(1) provides that violations of these requirements or of the reporting requirement shall be treated as separate offenses for each consumer product involved for the purpose of computing civil penalties. Section 2069(a)(2) states however, that this separate offense provision shall not apply to violations of section 2068(a)(1) and (2) if: (A) the violator is not the manufacturer or distributor of the products involved; and (B) the violator "did not have either (i) actual knowledge that his distribution or sale of the product violated such paragraphs or (ii) notice from the Commission that such distribution or sale would be a violation of such paragraphs."

If knowledge of the reporting requirement is specifically made an additional element for separate violations of §§ 2068(a)(1) and (2) by non-manufacturers and non-distributors, then by implication it is not a necessary

element for any separate violation of § 2068(a)(3) -- the reporting requirement. If knowledge of the reporting requirement is not necessary for separate violations of that requirement, then it also is not a necessary element for a single violation of that requirement.

Hence, by expressly stating the limited circumstances in which knowledge of the law is required, Congress has implicitly stated that it is not required in other circumstances. It thus appears that Congress did not intend to make knowledge of the law a necessary element for a violation of the CPSA reporting requirement. Since section 206 of the Energy Reorganization Act (ERA) was patterned after the CPSA, it follows that Congress did not intend knowledge of the law to be a necessary element for a violation of the ERA reporting requirement.

The drafters of the CPSA and section 206 probably would have used a term other than "knowingly" had they intended to make knowledge of the law a requirement. The CPSA allows civil penalties for knowing violations of the reporting requirement, but provides criminal penalties only for knowing and willful violations of that requirement. If "knowingly" meant knowledge of the law, then it would have been unnecessary to add the term "willfully," for an

additional mental element warranting the imposition of criminal penalties already would have been contained in the statute. "Knowingly" thus should not be interpreted as requiring an additional mental state, such as knowledge of the law, that Congress felt sufficient for criminal penalties.¹³

The Atomic Energy Act also uses the term "willfully" when stating the elements of a criminal offense. See, e.g., 42 U.S.C. §§ 2272, 2273, 2278a. Congress purposely chose not to use this term, however, when stating the elements of a civil violation of section 206. As originally proposed by the Senate, Section 206(c) provided for civil penalties for "knowing" violations, and section 206(b) provided for criminal penalties for "knowing and willful" violations. S. Rep. No. 93-980, 93rd Cong., 2d. Sess. 70 (1974). The provision for criminal penalties was deleted in conference and section 206(b) was changed to provide civil penalties for a "knowing and conscious" failure to provide notice. H.R. Rep. No. 93-1445, 93d Cong., 2d Sess. 36-37 (1974).

¹³ This analysis does not mean to suggest that knowledge of the law is required for a "willful" violation of the CPSA, of section 206 of the ERA, or of any section of the Atomic Energy Act. As previously stated, knowledge of the law usually is not necessary to establish criminal intent.

The conferees "substitute[d] the term 'consciously' for 'willfully,' the latter term being more applicable to a criminal act." Id. at 37. Congress therefore intended that the knowledge required for the imposition of civil penalties be a lesser type of knowledge than Congress was requiring for the imposition of criminal penalties. Thus, it would be inconsistent with Congressional intent to interpret the term "knowingly" to mean knowledge of the law.

In sum, it appears that Congress did not intend that a knowledge requirement sufficient for a criminal offense be required for a section 206 violation. In defining the mental element necessary for a section 206 violation, Congress used a term normally referring to knowledge of the facts essential to make an action unlawful, and deliberately stated it was not using a term denoting criminal intent. Thus, the legislative history of section 206 supports the conclusion that knowledge of section 206 is not a necessary element for a section 206 violation.

C. Case Law

In United States v. International Minerals & Chemicals Corporation, 402 U.S. 558 (1971), a shipper allegedly had violated an Interstate Commerce Commission regulation that

required transporters of hazardous materials to describe those articles on the shipping papers. The United States sought to impose a criminal penalty upon the shipper under 18 U.S.C. 834(f), which states that whoever "knowingly violates" any regulation of the Interstate Commerce Commission shall be fined or imprisoned. The shipper claimed that the term "knowingly" in the statute required the government to prove that he knew of the regulation he was charged with violating. The Court rejected this argument and held that shippers were presumed to know the law and therefore that proof of knowledge of the law was not necessary to establish a knowing violation. The Court found it would be "too much to conclude" from the statute's legislative history that Congress intended to "carv[e] out an exception to the general rule that ignorance of the law is no excuse." Id. at 563. The Court held that where "dangerous or deleterious devices or products or obnoxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them or dealing with them must be presumed to be aware of the regulation." Id. at 565.¹⁴

¹⁴The principle enunciated in International Minerals that knowledge of the law is presumed when the probability of regulation is great is well established. See United
(Footnote Continued)

This presumption should apply to the sale of nuclear class materials. A person supplying materials that he knows are to be used in a nuclear power plant reasonably can be expected to know that these materials are subject to regulation. No person rationally can claim ignorance of the fact that the construction and operation of nuclear power plants is heavily regulated. Moreover, if a supplier such as Tube-Line knows that materials supplied for nuclear construction must be nuclear class or certified to 10 C.F.R. Part 21, it is not reasonable to allow that person to escape liability by claiming that he was unaware of the specific details of those requirements. Such a result would encourage ignorance and deter firms selling nuclear class materials from learning the regulations governing their activities.¹⁵

(Footnote Continued)

States v. Freed, 401 U.S. 601 (1971) (possession of unregistered hand grenades in violation of the amended National Firearms Act); United States v. Dotterweich, 320 U.S. 277 (1943) (shipping misbranded and adulterated drugs in violation of the Federal Food, Drug, and Cosmetic Act); United States v. Ruisi, 460 F.2d 153 (2d Cir. 1972) (dealing in firearms without a license in violation of the Gun Control Act of 1968).

¹⁵If knowledge of the law were required, the most prudent course of action for an attorney for a responsible officer or director of a corporation subject to section 206 would be to make sure his client did not know the requirements of section 206. It is unreasonable to interpret a statute so that the enforcement provision

(Footnote Continued)

Three justices dissented from the majority's holding in International Minerals. The dissent would have held that "knowingly" refers to knowledge of the law. The dissent's argument was based on what it claimed was the plain meaning of the statute -- "that the words 'knowingly violates any such regulation' means no more and no less than 'knowingly violates any such regulation' ... [I]t would seem that a person would not knowingly violate a regulation unless he knows of the terms that what he is doing is contrary to the regulation." Id. at 566-67. The dissent conceded, however, that if the statute had been written so as to punish an act done knowingly rather than a violation done knowingly, then knowledge of the law would not be required. "If a statute provides that it shall be an offense 'knowingly' to sell adulterated milk, the offense is complete if the defendant sells what he knows to be adulterated milk, even though he does not know of the existence of the criminal statute, on the time-honored principle of the criminal law that ignorance of the law is no excuse." Id. at 566.

Section 206 makes punishable the knowing and conscious failure to notify, not a knowing and conscious violation of

(Footnote Continued)

discourages the accomplishment of one of the purposes of the substantive provisions.

the section. Thus, even the dissent in International Minerals would interpret section 206 so as not to require knowledge of the law. Furthermore, as previously mentioned, section 206(b) establishes civil rather than criminal penalties. Thus, if the Supreme Court interprets criminal statutes using the word "knowingly" so as not to impose a requirement of knowledge of law, it certainly will not interpret a civil statute to impose that requirement. The fact that the statute in International Minerals was criminal rather than civil thus does not alter the forcefulness of the interpretation that "knowingly" means knowledge of facts rather than law.

In Morissette v. United States, 342 U.S. 246 (1952), a leading case on criminal intent, the Supreme Court held that criminal intent was a necessary element of the criminal offense of "knowingly convert[ing]" property of the United States to one's own use. The defendant in Morissette, while hunting on a government bombing range, found and carried away three tons of spent bomb casings. Although the Court held that criminal intent was necessary for knowingly converting government property, it held that knowledge of the law was not required to establish such intent. The Court stated that "knowing conversion requires more than knowledge that defendant was taking the property into his

possession. He must have had knowledge of the facts, though not necessarily the law, that made the taking a conversion." Id. at 270-71. Thus, even in a case where "knowingly" was interpreted to require criminal intent, it was not interpreted to require knowledge of the law.

Morissette involved the common law offense of criminal conversion. Such offenses traditionally require some mental element. The Court distinguished this type of offense from a "public welfare offense." The latter type of violations "are not in the nature of positive aggressions or invasions, with which the common law so often dealt, but are in the nature of neglect where the law requires care, or inaction where it imposes a duty." Id. at 255-56. The Court stated that "legislation applicable to such offenses, as a matter of policy, does not specify intent as a necessary element." Id. at 256. If knowledge of the law is not required for an offense where criminal intent is a necessary element of the crime, then it certainly should not be required for a public welfare offense where criminal intent is not necessary, such as the section 206 notification requirement.¹⁶

¹⁶In Lambert v. California, 355 U.S. 225 (1957), the
(Footnote Continued)

Thus, there is considerable authority supporting the interpretation of "knowingly" so as not to require knowledge of the law. The cases hold that where there is a high probability of regulation, which there is in the construction and operation of nuclear power plants, knowledge of the law is presumed. It therefore does not need to be proved in order to establish a violation of section 206. Furthermore, the legislative history of that statute indicates that Congress did not intend for ignorance of the law to be an excuse for a violation of section 206. Under these circumstances, "knowingly and consciously" as used in section 206 should be interpreted to require knowledge of the facts to be reported rather than of the reporting requirement.

There is no unfairness in this result. If a person is doing business by selling nuclear class materials, it is

(Footnote Continued)

Court held that knowledge of the law was required in order to impose upon a person previously convicted of a felony criminal penalties for failing to register within five days of entering the City of Los Angeles. "Where a person did not know of the duty to register and where there was no proof of the probability of such knowledge, he may not be convicted consistently with due process." Id. at 229-30. This case is distinguishable from International Minerals by the lack of probability of regulation. Although a person may not reasonably be expected to know of a registration requirement upon entering a city, a person can reasonably be expected to anticipate that the transportation of hazardous materials or sale of nuclear class materials will be regulated.

reasonable to impose upon that person the costs of learning the relevant regulations. A person should not be allowed to reap the benefits of selling nuclear class materials without expending the costs necessary to comply with the regulations governing those materials. "In the interest of the larger good, it puts the burden of acting at hazard upon a person otherwise innocent but standing in responsible relation to a public danger." Morissette v. United States, 342 U.S. at 260. To allow corporate employees such as those of Tube-Line to escape liability based on lack of knowledge of section 206 or any other relevant statute or regulation would reward ignorance and disregard of the law. All indications are that Congress did not intend such a result.

QUESTION 3 (e).

Have any enforcement actions not been taken because the NRC believed it could not establish the requisite mental element under its interpretation of this statute?

ANSWER.

There have been a number of cases where the NRC has not imposed a civil sanction because we could not prove that the director or responsible officer had what we have interpreted to be the requisite knowledge under section 206. However, because of various factors related to the cases, the NRC does not have data that would permit us to determine how many cases might have resulted in civil penalties had there been no requisite mental element. For example, some of the cases investigated by the NRC that involved possible section 206 violations also involved potential violations of various criminal statutes pertaining to fraud, and they were, therefore, referred to the Department of Justice for possible prosecution. A number of these referred cases resulted in prosecution and conviction of the perpetrators on the basis of violations of general criminal statutes. Where that was so, the NRC did not pursue the matter further, and there was no final analysis of the possibility of NRC enforcement action.

Nevertheless, based on a review of our files for the last several years, we have identified a number of cases in which we refrained from proposing a civil penalty based on the judgment that we could not prove the requisite mental element. As the following descriptions illustrate, we have generally not been

able to impose a civil penalty under section 206 in these cases because we could not prove that an individual director or responsible officer of the company had knowledge of the defect. Thus, we have never reached the question whether a responsible officer of the company knew of the section 206 reporting requirement.

- o In two cases, a vendor to a reactor licensee supplied parts (reconditioned circuit breakers) that were not properly qualified. Though it was widely known within the industry that the vendor's suppliers (who were later prosecuted by the Department of Justice) sold noncomplying parts, it was not possible to obtain information to substantiate that any officer of the vendor firm knew of the noncompliance.
- o In a case involving false certified material test reports for materials used in a nuclear power plant, a responsible officer of the company knew that false reports violated NRC rules, but we were unable to prove that he knew the company was supplying substandard materials. A notice of violation was issued (severity level II), but no civil penalty was assessed. Several other cases involving supply of defective equipment by vendors have arisen where the vendor company was aware of NRC rules regarding equipment, but we were not able to establish that any individual director or responsible officer of the company knew of the defect.
- o In a case involving failure to report defects in timers installed on teletherapy units used for medical treatment, company

procedures addressing product defects made no provision for informing a director or responsible officer of the defects as required by 10 C.F.R. Part 21. A notice of violation (severity level III) was issued, but no civil penalty was assessed because the failure to notify did "not appear to have been the result of a knowing and conscious act by a director or responsible official" of the company. In several other cases, investigation disclosed that a vendor firm did not know there was a defect because the firm either did not have a program in place to determine if there was a substantial safety hazard, or the firm's program was inadequate (e.g., evaluations were deficient). There being no knowledge of the defect, there was no civil penalty assessed. However, a notice of violation was issued in many of these cases.

- o In a case involving failure to notify the NRC of a defect in repair kits supplied for scram solenoid pilot valves at a nuclear power plant, the company had an incorrect understanding of what is a "defect." Even though a responsible officer of the company had obtained information reasonably indicating a defect existed, he did not report the defect to the Commission. It appears from a brief review of the case that no civil penalty action was taken because of the company's inadequate evaluation and understanding of what constitutes a defect, rather than any lack of knowledge of the legal obligation to report a defect. A notice of violation (severity level III) was issued.

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QUESTION 4 (a). On April 2, 1993, the New York Times reported that the NRC staff had identified 15 nuclear power plants whose reactor vessels will need extensive analysis to determine the extent to which the metal in these vessels will perform as intended.

Please describe the problem with these reactor vessels.

ANSWER.

The concern regarding these reactor vessels is embrittlement of their material resulting in a decrease in upper-shelf energy from neutron irradiation. Section IV.A.1 of Appendix G, 10 CFR Part 50, requires licensees to maintain upper-shelf energy throughout the life of the vessel of no less than 50 ft-lb unless it is demonstrated in a manner approved by the Director, Office of Nuclear Reactor Regulation, that lower values of upper-shelf energy will provide margins of safety against fracture equivalent to those required by Appendix G of the ASME Code. The 50 ft-lb criterion is a conservative screening criterion. This criterion was established so that vessels with upper-shelf energies below 50 ft-lb would still have vessel integrity with margin. The NRC staff identified 15 nuclear power plants that currently do not meet the 50 ft-lb criterion based on NRC staff guidance. The NRC staff's guidance is based upon conservative generic data. The licensees for each of these plants reported to the NRC that, based on plant-specific data and evaluations, their reactor vessels currently satisfy the 50 ft-lb minimum upper-shelf energy criterion. These plant-specific analyses are currently under staff review. There are three additional plants with reactor vessel

QUESTION 4 (a) (continued)

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upper-shelf energies predicted to be less than 50 ft-lb before the end of their license based on the NRC staff generic analysis.

Four owners groups and several licensees have performed analyses to demonstrate that reactor vessels with substantially less than 50 ft-lb upper shelf energy will have margins of safety against fracture equivalent to those required by Appendix G of the ASME Code. The staff is reviewing these analyses at the present time. The Office of Nuclear Regulatory Research has also completed an analysis that demonstrates that reactor vessels can meet the margins of safety against fracture equivalent to those required by Appendix G of the ASME Code with upper-shelf energies substantially below 50 ft-lb.

QUESTION 4 (b).

Is it safe to continue the operation of these reactors while these studies are underway?

ANSWER.

Staff analysis shows that it is safe to continue the operation of these reactors because the industry and staff analyses show that the reactor vessels can be safely operated at upper-shelf energies considerably below the 50 ft-lb criterion. Adequate margins still exist when they are compared with the ASME Code requirements.

QUESTION 4 (c).

How much faster are these reactor vessels weakening than was originally projected?

ANSWER.

It is difficult to quantify how much faster the upper-shelf energy is dropping than originally projected for these reactor vessels. These 15 plants were licensed during a period of time when the effect of irradiation on upper-shelf energy was not well understood. Since the effect of irradiation on upper-shelf energy was not well understood, the NRC established a conservative screening criterion, and surveillance programs were initiated to ascertain that vessels with upper-shelf energies below 50 ft-lb would have vessel integrity with margins at a later date. Based on data from the reactor vessel surveillance programs that were established when these plants were licensed, the effect of neutron irradiation is better understood today than it was at the time these reactor vessels were originally licensed. These surveillance data were used to develop the staff's generic criteria.

QUESTION 4 (d). Will these reactors be able to operate for the full term of their operating license?

ANSWER.

Based on the industry and staff analyses performed, we believe that the licensees will be able to satisfy Section IV.A.1 in Appendix G for the full term of their operating licenses and upper-shelf energy will not limit operation of these reactors for the full term of their operating licenses. The staff is currently reviewing industry analyses to verify that all licensees will satisfy the required margins at end of license. This review will be completed by December 31, 1993.

QUESTION 4 (e). Will these reactors be able to obtain license extensions without costly studies or replacement of important components?

ANSWER.

Licensees that can satisfy the upper-shelf energy requirements of Appendix G, 10 CFR Part 50 will be able to obtain license extensions without costly studies or replacement of the reactor vessel, provided they can meet other regulatory requirements.

Question 5 (a). Nuclear Plant Decommissioning

What is the status of NRC's enhanced participatory rulemaking on decontamination and decommissioning standards?

Answer.

Publication of the proposed rule is scheduled for June 1994, and the final rule is expected to follow in June 1995. The staff obtained enhanced participation in this rulemaking from a broad spectrum of stakeholders, including state, tribal and local governments, citizen groups, environmental interests, and industry representatives. This was accomplished by soliciting comment and viewpoints through seven workshops and eight separate Generic Environmental Impact Statement (GEIS) scoping meetings held across the country from January through July 1993. The comments and viewpoints received are currently being evaluated by the staff in its development of the draft decontamination and decommissioning standards. The staff will obtain an early solicitation of comment by Agreement States, workshop participants and other interested groups on the staff's draft of the proposed rule. Responses to this round of comments will be considered before the draft proposed rule is sent to the Commission.

QUESTION 5 (b). Nuclear Plant Decommissioning--

- (8) Please describe EPA's role in the development of [NRC's decontamination and decommissioning] standards. Has EPA voiced any objections to the NRC's approach during this process? Has EPA supported the NRC's efforts during this process?

ANSWER.

NRC and EPA have been cooperating in the development of NRC's radiological criteria for decommissioning through the Enhanced Participatory Rulemaking (EPR). The objective of these cooperative efforts is to ensure development of consistent Federal requirements for decommissioning nuclear facilities. EPA recognized since the initiation of NRC's rulemaking in 1992, that the information developed through the EPR would also be beneficial in EPA's parallel development of radiation cleanup standards. EPA's rulemaking is focusing primarily on cleanup of Federal facilities. The agencies agreed in September 1992, that EPA would propose, through a rulemaking, to exclude NRC-licensed facilities from the scope of its standards if it determined that NRC's radiological criteria for decommissioning provided sufficient protection of the public and environment.

EPA management and staff participated in each of NRC's public rulemaking workshops held in seven cities around the country from January through May 1993. In addition, EPA staff reviewed and contributed to the Rulemaking Issues Paper that was used to focus discussions during the rulemaking

QUESTION 5 (b). (continued)

workshops. EPA is also a cooperating agency in the development of the Generic Environmental Impact Statement (GEIS) in support of NRC's rulemaking. EPA participated in the first two of eight public meetings held by NRC in July 1993, on the scope of the GEIS.

NRC and EPA are also cooperating through the Interagency Steering Committee on Residual Radioactivity. This Committee was created at the request of the Office of Management and Budget in January 1993. Under the aegis of the Steering Committee, NRC and EPA staffs have been meeting frequently, along with representatives of the Department of Energy and Department of Defense, to exchange and evaluate information on the technology, dose modeling, and costs associated with remediating radiologically contaminated sites.

EPA has not voiced any objections to NRC's approach in the EPR. In fact, EPA has encouraged the open process to collect the views of a diverse group of interested parties early in the rulemaking process. We understand that EPA is planning to continue this dialogue through other mechanisms in support of its rulemaking to establish radiation cleanup standards. EPA has supported NRC's rulemaking effort to date through participating in the public meetings and workshops, reviewing draft technical and regulatory analyses in support of the rulemaking, and evaluating the comments obtained through the rulemaking workshops.

QUESTION 5 (c). Does NRC have reliable estimates of the eventual costs of decommissioning for nuclear power plants?

ANSWER.

The NRC established minimum financial assurance amounts for decommissioning of power reactors on a generic basis in 1988 when it issued the decommissioning regulations in 10 CFR 50.75. These minimum values were in 1986 dollars and are required to be updated annually by licensees to reflect actual increases in the costs of labor, energy, and low-level radioactive waste disposal. These cost estimates do not include costs for removal of non-radioactive equipment and structures (often called "green field restoration") or the costs for storage of spent fuel since these costs are not considered to be decommissioning costs under current NRC regulations.

Certain reported decommissioning cost estimates made by licensees have differed significantly from the minimum cost values published by the NRC in 10 CFR 50.75. However, in nearly all cases no substantial unexplained cost differences remained after careful cost comparisons were made to ensure that (1) the estimates were prepared using the same year dollars, (2) comparable assumptions were used for waste burial costs, and (3) green field and spent fuel storage costs were not included.

The NRC is now in the process of reevaluating the original decommissioning cost estimates upon which these minimum values were based to reflect the

QUESTION 5 (c). (Continued)

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conditions that decommissioning plants currently face. The most significant contributors to changing estimates are the (1) rapid escalation of low-level waste disposal costs, (2) the assumptions of the amount of low-level waste generated, and (3) the uncertainty that licensees face with respect to availability of off-site disposal capacity of spent fuel. The new studies will take into account knowledge obtained from decommissioning of operating reactor facilities, including facilities such as Shippingport, although we still have little actual cost data on decommissioning of larger facilities. The NRC analyses of updated decommissioning costs for pressurized water reactors and boiling water reactors will be published for public comment by September 1993 and March 1994, respectively. The NRC is also evaluating the feasibility of including spent fuel costs and "green field restoration" costs in its estimates.

QUESTION 5 (d). Will utilities have enough money to pay for decommissioning?
How are these costs being apportioned between current and
future ratepayers?

ANSWER.

NRC regulations require licensees to provide financial assurance of the ability to pay for decommissioning of all licensed power reactors. Nearly all utilities have established trust funds into which periodic contributions are made so that all funds will be available at the time the reactor license expires. Plants that terminate operation before their licenses expire will typically not have enough funds at the time of shutdown to complete decommissioning. NRC decommissioning regulations require case-by-case reviews of financial assurance for such plants. Recent prematurely shut down reactors (Fort St. Vrain, Shoreham, Rancho Seco, and Yankee Rowe) have not had difficulty in making arrangements to raise funds to make up the initial shortfalls in their trust funds. Based upon the experiences of these reactors, the NRC believes that utilities, even those with prematurely shutdown plants, will not have difficulty raising funds for decommissioning.

Regarding the issue of how decommissioning costs are apportioned between current and future ratepayers, the NRC has deferred all such issues to individual state rate regulatory agencies and to the Federal Energy Regulatory Commission. However, if a public utility commission did not allow a utility to recover decommissioning funds from the ratepayers, the NRC would still require the licensee to fund decommissioning, most likely with funds from the stockholders.

QUESTION 5 (e). What will be done with the spent nuclear fuel at decommissioned sites prior to the operation of a permanent repository for spent nuclear fuel? For example, what will be done with the spent nuclear fuel at the Yankee Rowe nuclear plant? Does the NRC have reasonable assurance that the storage of spent fuel at the sites with decommissioned reactors will pose no undue risk to the public health and safety?

ANSWER.

Until it is ultimately transferred to the Department of Energy for storage, spent fuel at decommissioning reactors may be (1) kept in the existing spent fuel pool, (2) transferred to an Independent Spent Fuel Storage Installation (ISFSI), or (3) transferred to another licensed reactor facility for use and/or storage.

The licensee of the Yankee Rowe facility plans to keep its spent fuel in the existing spent fuel pool until the late 1990's when it will then be transferred to an ISFSI.

On September 18, 1990, the NRC published its review of previous conclusions regarding the adequacy of current and future plans for the storage of high level radioactive waste in its "Review and Final Revision of the Waste Confidence Decision" (55 FR 38474). Finding 4 of this decision states:

QUESTION 5 (e). (Continued)

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The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin, or at either onsite or offsite independent spent fuel storage installations.

Thus, the Commission believes that there are no unresolved safety or environmental concerns associated with storage of spent reactor fuel.

Question 6 (a).

What activities does the NRC plan on doing in fiscal years 1994 and 1995 with respect to international nuclear safety? What type of activities will the NRC be undertaking to improve the safety of reactors designed in the former Soviet Union? In answering this question, please provide dollar amounts as well as a description of these activities.

Answer.

The NRC will continue its efforts to promote international nuclear safety during FY 1994 and 1995. These activities include technical information exchanges with foreign countries on regulatory/safety matters, training of foreign regulatory officials in nuclear safety, collaborative international nuclear safety research, export/import licensing reviews (including international safeguards/physical security reviews), and nonproliferation efforts. For FY 94 NRC has earmarked approximately \$11 million of its resources to support these activities. This includes the program support, travel, salaries, and benefits associated with the approximately 60 FTE's NRC will expend on these efforts. A similar level of effort is anticipated for FY 95.

NRC's overall international activities include efforts to improve the safety of reactors designed in the former Soviet Union. These activities focus on Russia and Ukraine, since this is where the majority of Soviet-designed reactors are located, and in the countries of Central and Eastern Europe.

QUESTION 6 (a). (continued)

NRC, building on the success of the Joint Coordinating Committee on Civilian Nuclear Reactor Safety, has focused its efforts on strengthening the regulatory bodies of these countries through training regulatory personnel, assisting in developing inspection regulations and guides, assisting in developing national regulatory laws, transfer of computer codes used for performing safety analyses, providing an analytic simulator, and assisting in developing the technical infrastructure necessary to support enforcement of nuclear safety regulations.

NRC efforts to improve the safety of reactors designed in the former Soviet Union also include activities associated with the Lisbon Initiative on Nuclear Reactor Safety of May 1992. The Lisbon Initiative consists of three parts:

- operational safety improvements;
- risk reduction measures at specific reactor sites, with particular emphasis on higher risk plants (RBMKs and VVER 440/230s); and
- nuclear regulatory assistance.

The Department of Energy has responsibility for implementing the first two areas while NRC has the third. An initial contribution of \$25 million of FY 92 funds from AID was pledged with \$21.9 million to support DOE activities and \$3.1 million to support NRC regulatory assistance activities. NRC has recently signed an agreement with AID for an additional \$5 million in

QUESTION 6 (a). (continued)

assistance from FY 93 funds to support these activities. In addition, NRC expects to request additional funds from AID to support activities in this area.

Question 6 (b). Has any of the assistance provided by NRC to date been effective in improving the safety of reactors designed in the former Soviet Union? Please explain.

Answer.

During the past seven years extensive efforts have been devoted by the NRC to nuclear safety cooperation with, and assistance to, the former Soviet Union (FSU). The NRC believes that its activities have resulted in a number of significant accomplishments.

In general, NRC efforts have been in three phases: 1) the early post-Chernobyl phase (1986-1988), 2) development of cooperative activities under the Joint Coordinating Committee on Civilian Nuclear Reactor Safety, or JCCCNRS (1988-present), and 3) technical assistance (May 1992 until the present).

Preliminary interchange directed at understanding Soviet nuclear reactor design and operation characterized the first phase, in which the U.S. and other countries tried to determine the causes and consequences of the Chernobyl nuclear accident of April 26, 1986. The major accomplishment of this stage was to gain the Soviets' trust and to show them that the West had much to provide about nuclear safety.

The second, more substantive phase began with the signing of a U.S.-USSR Memorandum of Cooperation on Nuclear Safety, on the second anniversary of the Chernobyl accident, April 26, 1988. Interactions took the form of ten (later

QUESTION 6 (b). (continued)

to grow to twelve) working groups on technical aspects of civilian nuclear power reactor safety (see Appendix 11). These exchanges were of value to the NRC and to the nuclear establishment of the former Soviet Union, both regulators and nuclear power planners. Some of the benefits of these exchanges are:

- Information Exchange: Through 1992, about 50 technical meetings in the FSU and the U.S. led to a deeper understanding by the FSU of the technical, legal and organizational approaches to safety employed in the West and had a positive influence on Russian and Ukrainian safety culture, making them better able to help themselves improve safety.
- Inspector Exchanges: An unprecedented series of exchanges of inspection personnel for extended periods at nuclear facilities has benefitted regulatory authorities in the USSR, broadened U.S. understanding of the Soviet regulatory infrastructure, and led to efforts to change some Soviet policies and practices.
- Severe accident research. The Russian Kurchatov Institute is working with NRC using Russian facilities whose technical equivalent are not available in the U.S. and is contributing to the NRC mission. As a significant milestone in this work, Kurchatov's safety research director spent several months at NRC in 1990 to learn how safety research is done in the U.S. so this knowledge could be applied in Russia. In addition, the NRC provided to Kurchatov U.S. codes for analysis of severe reactor accidents.

QUESTION 6 (b). (continued)

3

- Involvement in Western technical organizations: In exchange for the accident codes Russia has become a member of the International Code Assessment Program, an association of Western countries interested in simulating reactor accidents.
- Russian annealing technology: Through the exchanges the U.S. has learned much about Russian annealing technology. For example, NRC learned that the Soviets had annealed (heat-treated) reactor pressure vessels that had become embrittled by radiation and they had obtained almost complete ductile recovery. Because of similar problems of embrittlement being encountered in U.S. reactors, the NRC is interested in this technology, and some utilities with older plants are also investigating its promise.

The U.S. has also learned about unsatisfactory conditions in nuclear power stations in the former Soviet Union and weaknesses in nuclear safety regulation there. When the Soviet Union dissolved in 1991, the NRC was instrumental in U.S. efforts to assist in nuclear reactor safety and regulatory improvements in Russia and Ukraine. The programs of assistance that were developed drew extensively on previous years' cooperative activities.

The Lisbon Initiative began the third phase of U.S. nuclear safety cooperation with the former Soviet Union. This phase emphasized direct assistance and building upon the program of technical cooperation.

QUESTION 6 (b). (continued)

4

Two months after the Lisbon program was announced, NRC officials met with Russian and Ukrainian regulators to solicit their ideas for enhancing their regulatory capabilities. The programs developed for regulatory assistance are mainly oriented toward training in licensing, inspection, research, and emergency response.

Program training is conducted during group visits of Russian and Ukrainian regulators at NRC headquarters, regional offices, and the NRC Technical Training Center in Chattanooga, Tennessee, or when NRC staff provide briefings or seminars in Russia or Ukraine. Of the 60 visits planned, 23 were underway or completed by the end of July 1993, involving about 60 people from these countries who were trained for an average of three weeks, with some staying for as long as three months. The assignees report the training is effective because it is specific and technical; and because it is outside their homeland, it offers a different cultural perspective as well. In addition, foreign regulatory participants have remarked that this training has made them aware of the additional gulf of technical information they should become familiar with and study for possible incorporation into their regulatory programs.

Meetings of the JCCCNRS occur annually to set the future direction of the program. The latest, in March 1993, successfully combined nuclear safety programs (cooperation & assistance) for both Russia and Ukraine for the first time since the breakup of the USSR. This will help the Russians and Ukrainians continue to work together on vital nuclear safety matters and help the U.S. husband its scarce assistance resources.

Question 6 (c).

How much of a threat do Soviet-designed reactors continue to pose?

Question 6 (d).

What types of additional efforts are necessary to improve the safety of these reactors?

Answer.

Western experts agree that prolonged operation of certain types of Soviet-designed nuclear power reactors, in particular the RBMK and VVER 440/230, poses an unacceptably high risk to the public health and safety, and that operation of these types of facilities should be discontinued as quickly as possible. US assistance efforts for these facilities under the Lisbon Initiative have focused on identifying short term risk reduction actions that can reduce the likelihood of their having a serious incident. The significant deficiencies associated with these types of reactors (including lack of emergency core cooling systems, lack of a containment structure, lack of separation and redundancy of equipment, facility material condition or "housekeeping," and operational complexity) makes their long term upgrading to an acceptable level of safety impractical.

Western experts also agree that certain types of Soviet-designed nuclear power reactors, in particular the VVER 440/213 and VVER 1000, can be effectively upgraded to an acceptable level of safety. For example, the Loviisa facility in Finland utilizes two VVER 440/213 reactors that have been upgraded to meet western safety standards. The G-7 members have agreed that the operators of these reactors should obtain funding for safety upgrades of these reactors by

QUESTION 6 (c) and 6 (d). (Continued)

available commercial means (such as through infusions of private capital or international financial institutional help).

Question 6 (e).

What is the most effective use of the limited funds that are available for foreign assistance to improve the safety of the Soviet designed reactors: Should these limited funds be used to improve the safety of the least-safe reactors, such as the RBMK's? Or, should these funds not be used for activities which might prolong the operation of these unsafe reactors -- for example, should funds be used to develop alternative sources of electricity so that these unsafe reactors might be able to be shut down? In other words, what should be the priorities for our assistance in this area?

Answer.

In July 1992, at the Munich Summit, the U.S. along with the other G-7 countries expressed concern about the safety of Soviet-designed nuclear power plants and offered assistance. The members called for immediate measures to improve operational safety, to make near-term improvements based on plant-specific safety assessments, and to enhance regulatory regimes in order to improve the short term operations of these plants to prevent another serious accident. We agree with this strategy and are participating in implementing it through the Lisbon Initiative on Nuclear Safety and the JCCCNRS with Russia and Ukraine, and through bilateral regulatory assistance packages with the countries of Eastern Europe that are operating Soviet-designed nuclear power plants.

QUESTION 6 (e). (Continued)

In general, our view is that the short term improvements in operations and emergency hardware upgrades, along with needed regulatory reforms, are the correct priorities to prevent another serious accident in the short run, and these should be the focus of our limited assistance effort. Longer range programs of improvements to newer, safer designs will require commercial (as well as some concessionary) financing. This is also consistent with the views of the other G-7 members. The 1992 G-7 program of action called for examination of the scope for replacing less safe plants by the development of alternative energy sources and the more efficient use of energy. To this end, the G-7 commissioned studies which are now complete, by the International Energy Agency, the World Bank, and the European Bank for Reconstruction and Development to analyze prospects for replacing the reactors and/or upgrading them and the economic implications. In addition, the G-7 program recognized the potential for upgrading plants of more recent design and called for studies to ascertain what upgrades would be needed.

More recently, the G-7 meeting in Tokyo in July 1993, concluded that longer-term international assistance for nuclear safety needed to be linked to the recipient's overall economic and energy situation, and asked the EBRD, the World Bank, the IEA and the European Investment Bank to aid the recipient countries in integrating long-term energy strategies with nuclear safety issues. We recognize that nuclear safety improvements must be linked to energy sector reforms such as price liberalization and conservation. Since these reforms will be complex and costly, the G-7 noted that the recipient countries will need concessionary lending in the near term and future

QUESTION 6 (e). (Continued)

commercial loans. But the short term improvements must still be made, and we are urging the leaders of Russia and Ukraine to take the lead in these efforts, since they are the responsible parties.

Our programs of assistance to regulatory agencies in the countries using these reactors are consistent with all these programs and assumptions. As the recipients of U.S. aid develop their economic infrastructures to attract western capital, they will also have to strengthen their regulatory structures and legal systems to give western investors confidence that they have a strong commitment to nuclear safety. This cannot be done without a strong and independent regulatory structure with the authority to, if necessary, order the shutdown of high-risk plants. The NRC is working closely with the highest levels of the U.S. government to make sure the recipients of U.S. aid understand this.

Question 6 (f).

What is the NRC's view of the proposal, and the efforts to date, to develop an international convention on nuclear safety? What is the NRC's role in the development of this convention?

Answer.

The NRC has and will continue to support international efforts to achieve an International Nuclear Safety Convention at the earliest possible date. A principal theme of this convention would be to establish a set of principles for strengthening commercial nuclear power plant safety worldwide.

The U.S. has participated in six working group meetings to date under the aegis of the IAEA to discuss and develop the possible elements for such a convention. The focus of such a convention would be initially on nuclear power plants, moving later to issues such as nuclear waste. In addition, the Chairman of the convention's working group is preparing a draft of the convention which will be presented to Member States for comment prior to the next working group meeting in October. NRC will participate in that meeting and will continue to contribute ideas for the development of the Convention (such as suggestions for the peer review arrangements at meetings of the parties).

QUESTION 7 (a).

The GAO recently released a report that was critical of NRC's agreement state program. GAO found that the NRC had not established any performance indicators for the agreement states, and did not have enough information to adequately monitor the performance of agreement states. GAO also found that the NRC had vague rather than specific criteria or procedures for suspending or revoking an agreement state program.

- (a) What is the NRC's reaction to the GAO's recommendations?

ANSWER.

The NRC response to the GAO report, "Nuclear Regulation: Better Criteria and Data Would Help Ensure Safety of Nuclear Materials," is documented in a letter dated July 28, 1993 to the Honorable John Glenn, Chairman, Committee on Governmental Affairs from Chairman Ivan Selin. A copy of this letter is enclosed.

Enclosure:

As stated

ENCLOSURE

QUESTION 7(a)



CHAIRMAN

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 28, 1993

The Honorable John Glenn, Chairman
Committee on Governmental Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

In accordance with the statutory obligation to respond to recommendations by the General Accounting Office (GAO) within 60 days of receipt, we hereby submit our responses to the recommendations made by the GAO in their report entitled, "NUCLEAR REGULATION: BETTER CRITERIA AND DATA WOULD HELP ENSURE SAFETY OF NUCLEAR MATERIALS." We agree with most of the recommendations.

Specific comments on the GAO recommendations are presented in Enclosure 1. Enclosure 2 presents updated information for Tables II.1, II.2, and II.3 of the GAO report. Enclosure 3 presents updated data for Table III.3 in the GAO report. These new data have been discussed with GAO, and they agree that these updated tables present the information which should be used when seeking to compare the NRC materials program and the Agreement State programs.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ivan Selin", is written above the printed name.

Ivan Selin

Enclosure:

1. Response to GAO Recommendations
2. Updated Data for Tables II.1, II.2, and II.3
3. Updated Data for Table III.3

cc: Senator William V. Roth, Jr.

(Originated by: DSollenberger, SP)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555



CHAIRMAN

July 28, 1993

The Honorable Joseph I. Lieberman, Chairman
Subcommittee on Clean Air and Nuclear Regulation
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

In accordance with the statutory obligation to respond to recommendations by the General Accounting Office (GAO) within 60 days of receipt, we hereby submit our responses to the recommendations made by the GAO in their report entitled, "NUCLEAR REGULATION: BETTER CRITERIA AND DATA WOULD HELP ENSURE SAFETY OF NUCLEAR MATERIALS." We agree with most of the recommendations.

Specific comments on the GAO recommendations are presented in Enclosure 1. Enclosure 2 presents updated information for Tables II.1, II.2, and II.3 of the GAO report. Enclosure 3 presents updated data for Table III.3 in the GAO report. These new data have been discussed with GAO, and they agree that these updated tables present the information which should be used when seeking to compare the NRC materials program and the Agreement State programs.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ivan Selin".

Ivan Selin

Enclosure:

1. Response to GAO Recommendations
2. Updated Data for Tables II.1, II.2, and II.3
3. Updated Data for Table III.3

cc: Senator Alan K. Simpson

GAO Report - NUCLEAR REGULATION: Better Criteria and Data
Would Help Ensure Safety of Nuclear Materials
GAO/RCED-93-90

Response to Recommendations

Chapter 2

The GAO stated that the Chairman of the NRC should take several actions to modify the inconsistent way in which the NRC evaluates the effectiveness of its two materials programs in achieving the goal of adequately protecting the public from radiation.

Recommendation 1

GAO recommendation: The Chairman, NRC, should establish "common performance indicators in order to obtain comparable information to evaluate the effectiveness of both the Agreement State and NRC regulated state programs in meeting NRC's goal."

NRC Response

We agree, and the Commission intends to implement a new program evaluation approach beginning next year. Although differences exist in the roles and regulatory responsibilities of the 29 agreement states versus the 5 NRC regional offices, core performance indicators for NRC and agreement state program evaluation will be helpful in evaluating the effectiveness of the national nuclear materials program. We are currently considering core performance indicators that include both the traditional programmatic indicators as well as output indicators such as medical misadministrations, lost or abandoned radioactive sources, radiation overexposures, and contaminated sites. We are also considering graded evaluations of these core performance indicators which will be used in the development of an annual integrated materials safety evaluation. We will use these indicators as a basis for an annual discussion with the Organization of Agreement States, present the results at the NRC senior management meeting in June of each year, and brief the Commission annually at a public meeting.

Recommendation 2

GAO recommendation: The Chairman, NRC, should establish "specific criteria and procedures for suspending or revoking an agreement-state program. Once NRC ensures the effectiveness of the NRC-regulated state program using the new performance indicators, it should take aggressive action to suspend or revoke any agreement-state program that is incompatible or inadequate with the performance indicators."

ENCLOSURE 1

NRC Response

We agree with GAO with regard to the need to have specific procedures for termination of an agreement and we intend to complete such written procedures in 1994. These procedures will include early Commission involvement when an agreement state program begins to have trouble. We too are concerned about the delay which may occur between the time we are first concerned about an agreement state program and the time that the concern is corrected. We will address that issue in our procedures.

The GAO report points out correctly that since our criteria were formalized in a policy statement in 1981, the NRC has never formally found a state to be inadequate to protect public health and safety. Our General Statement of Policy states that if no significant Category I comments are provided, the program is adequate to protect the public health and safety. The converse, however, is not necessarily true. If comments on Category I indicators are provided, this means we believe that the program deficiencies might eventually, if allowed to continue unremedied, seriously affect the state's ability to protect the public health and safety, but it does not necessarily mean that there is an immediate threat to public health and safety.

For example, the status of the state's inspection program is a Category I indicator under our guidelines. The fact that a licensee is overdue for inspection does not necessarily mean that the public health and safety are compromised. The licensee may be continuing to run an effective radiation safety program protecting health and safety. Overdue inspections are, however, a regulatory deficiency that could compromise the state's ability to protect public health and safety in the long run. Hence, we would withhold a finding of adequacy until the state addressed this programmatic deficiency.

The Atomic Energy Act makes clear that agreement state status is a long term commitment for the state; neither we nor the states take lightly the termination of an agreement. We do not take an inflexible "regulatory" approach that requires a state to do everything our way. We believe that the states are committed to protecting public health and safety adequately and maintaining regulatory programs consistent with their commitments. If, however, we became aware of a specific situation in a state where the health and safety of the public was in serious jeopardy and in our judgement the state was unwilling or unable to take decisive action, we would not hesitate to take unilateral action to reassert authority over that situation.

Recommendation 3

GAO recommendation: The Chairman, NRC, should "require agreement states to report abnormal occurrences so that NRC can include the occurrences in its quarterly report to Congress."

and

Recommendation 4

GAO recommendation: The Chairman, NRC, should "take appropriate action to ensure that the information on radiation events in agreement states is reported completely and accurately."

NRC Response

We agree that abnormal occurrences should be reported to the NRC for inclusion in the quarterly report to Congress required by Section 208 of the Energy Reorganization Act of 1974, but as a practical matter we get what information the states have. Although Section 208 does not address abnormal occurrences involving agreement state licensees, NRC requested agreement state cooperation in providing such information to Congress. Through the exchange-of-information program, to which the states accede in each agreement, the agreement states agreed to provide us with a great deal of information regarding their programs, including information on events occurring in their states. The NRC established an agreement state abnormal occurrence reporting system on July 1, 1977. The agreement states periodically provide to the NRC events/incident reports; these are evaluated by our Office for Analysis and Evaluation of Operational Data (AEOD), in coordination with the Office of State Programs (OSP), to identify reports which may reach the threshold of an abnormal occurrence. If any event reaches the threshold, NRC reports it to Congress.

While the agreement states participate in the abnormal occurrence reporting program based on the commitment, discussed above, to exchange information with the NRC, the GAO points out that some agreement states have not submitted abnormal occurrence reports. The GAO report also observes that the data available on the agreement state programs are not identical to those that are available for the NRC materials program. These observations are correct and we are in the process of rectifying this situation.

For the most recent reporting period, we advised the state regulators about the need for complete event data, and we followed up with telephone calls to the states to remind them. As a result, we obtained event reports from all 29 agreement states for 1992. We continue working to increase the level of uniformity between the NRC and the agreement states on reporting. In August 1993 the NRC is hosting a management workshop for the agreement states to discuss event reporting, along with enforcement, allegation, and investigation issues. The goal of the workshop is to provide the agreement states and NRC participants with a better understanding of these program issues, with the goal of increasing convergence among all the programs.

Chapter 3Recommendation 1

GAO recommendation: "Because NRC has not acted on our 1988 recommendation on financial assurance, the Congress may wish to consider enacting legislation requiring NRC to establish a reasonable, minimum level of financial assurance that licensees must provide for accidental spills or releases of radioactive material."

NRC Response

We do not agree with this conclusion.

During the 1988 review of the NRC materials program, GAO recommended that NRC require licensees to guarantee a level of financial assurance for the cleanup of accidental spills and releases of radioactive material. GAO acknowledged that the staff had looked into this matter and had contracted for studies by Sandia National Laboratories and Pacific Northwest Laboratories to determine the likelihood and potential consequence of such accidents. After considering these studies and input from other sources, the staff advised the Commission that the need for a separate financial assurance program, focused narrowly on cleanup of contamination from accidents, could not be supported by the required regulatory analysis. Given this advice, and particularly in light of the broader issues of financial assurance for decommissioning, the staff, rather than focusing on accidental spills to the exclusion of some routine operations, is reviewing the broader issues of decontamination and decommissioning arising from all sources of contamination. In short, although the GAO believes the NRC is reluctant to act decisively on its recommendation, in fact NRC is taking the time necessary to address the issue in a broader context; rulemaking will be initiated if the required regulatory analysis supports the finding that the benefits outweigh the costs.

Agreement-State Data by State

Table II.1: Selected Data on Agreement States

State	Review date	State adequate	State compatible	Incidents or alleged incidents		Staff per hundred licensees	Percent of budget generated by fees
				Reports	Investigated		
Ala.	6/14/91	Yes	Yes	35	17	.7	7
Ariz.	6/12/92	Yes	*	8	8	1.3	
Ark.	2/26/93	Yes	Yes	10	10	1.0	1
Calif.	1/29/93	No	*	186	141	.82	9
Colo.	4/9/93	Yes	*	22	3	1.20	7
Fla.	2/26/93	Yes	Yes	137	133	1.48	10
Ga.	10/18/91	Yes	Yes	19	6	1.2	10
Ill.	1/21/92	Yes	Yes	119	43	1.4	3
Iowa	7/20/90	*	*	14	12	.85	4
Kans.	2/26/93	Yes	*	7	2	1.2	11
Ky.	4/17/92	Yes	*	7	3	1.0	6
La.	8/23/91	Yes	*	32	32	1.15	7
Maine	4/28/93	*	*	1	0	.83	1
Md.	3/27/91	Yes	*	85	78	1.07	3
Miss.	9/13/91	Yes	Yes	19	10	1.13	10
N.C.	11/22/91	Yes	Yes	70	15	1.1	3
N.Dak.	6/07/91	Yes	*	4	2	2.08	1
Nebr.	6/26/92	*	*	3	3	.81	8
N.H.	6/5/92	*	*	13	9	2.0	1
N.Mex.	8/14/92	Yes	*	29	26	1.58	1
Nev.	3/5/93	Yes	*	10	7	1.32	2
N.Y.	9/30/92	Yes	*	181	47	1.3	Varies
Oreg.	4/2/93	Yes	Yes	82	20	1.0	10
R.I.	11/22/91	Yes	Yes	7	5	1.5	3
S.C.	3/24/93	Yes	Yes	4	1	1.2	3
Tenn.	12/13/91	*	*	94	30	1.4	7
Tex.	3/27/92	Yes	Yes	350	318	1.3	1
Utah.	4/17/92	Yes	Yes	35	8	1.8	2
Wash.	7/17/92	Yes	Yes	26	21	1.4	10
Total				1,580	1,019		

*NRC reported that it was not able to find that the agreement-state's program was adequate to protect public health and/or that it was compatible with the regulatory programs of NRC.

Source: Data were obtained from agreement-state questionnaires as of June 30, 1993.

ENCLOSURE 2

Table II.2: Agreement States' Licensing

State	Review date	Total Licenses	Major Licenses	Licenses Terminated	Close-of Inspection
Ala.	6/14/91	467	11	74	1
Ariz.	6/12/92	297	14	22	2
Ark.	2/26/93	254	19	9	
Calif.	1/29/93	2,231	120	118	
Colo.	4/9/93	403	24	86	
Fla.	2/26/93	1,100	44	95	10
Ga.	10/18/91	658	26	103	
Ill.	1/21/92	957	88	57	
Iowa	7/20/90	219	6	5	
Kans.	2/26/93	332	4	8	
Ky.	4/17/92	388	4	20	
La.	8/23/91	650	23	67	
Maine	4/28/93	116	2	3	
Md.	3/27/91	516	22	84	36
Miss.	8/13/91	320	7	82	
N.C.	11/22/91	604	36	75	
N.Dak.	8/07/91	87	3	16	5
Nebr.	6/26/92	177	8	14	4
N.H.	6/5/92	108	2	17	
N.Mex.	6/14/92	225	7	13	23
Nev.	3/5/93	182	2	6	
N.Y.	8/30/92	1,889	111	84	15
Oreg.	4/2/93	299	12	19	2
R.I.	11/22/91	68	2	10	1
S.C.	3/24/93	325	23	10	2
Tenn.	12/13/91	554	33	47	3
Tex.	3/27/92	1,731	18	184	83
Utah	4/17/92	215	12	35	1
Wash.	7/17/92	379	27	40	1
Total		16,321	688	1,972	233

*Data not available.

Source: Data were obtained from agreement-state questionnaires as of June 30, 1993.

Table II.3: Agreement States' Inspections and Civil Penalty Authority

State	Review date	Inspections completed	Number overdue	Reciprocity			Civil penalty authority
				Notice	Inspections Number	Percent	
Ala.	6/14/91	250	2	400	4	1.0	Yes
Ariz.	6/12/92	294	0	48	2	4.1	Yes
Ark.	2/26/93	84	21	554	11	2	Yes
Calif.	1/29/93	334	83	118	23	19.5	Yes
Colo.	4/9/93	172	2	276	3	1.0	Yes
Fla.	2/26/93	487	9	200	7	3.5	Yes
Ga.	10/18/91	296	0	277	8	2.2	Yes
Ill.	1/21/92	711	0	531	9	1.7	Yes
Iowa	7/20/90	88	0	100	0	0	Yes
Kans.	2/26/93	105	21	80	7	8.8	Yes
Ky.	4/17/92	110	0	625	4	.64	Yes
La.	8/23/91	481	29	474	11	2.3	Yes
Maine	4/28/93	6	25	123	0	0	Yes
Md.	3/27/91	264	89	240	21	8.7	Yes
Miss.	9/13/91	195	0	1,002	16	1.5	No
N.C.	11/22/91	671	0	94	16	16.0	Yes
N.Dak.	6/07/91	80	16	25	2	8.0	Yes
Nebr.	6/26/92	15	20	137	1	.007	Yes
N.H.	6/5/92	31	43	220	6	2.7	No
N.Mex.	8/14/92	255	0	46	3	6.5	No
Nev.	3/5/93	83	0	120	2	1.6	No
N.Y.	9/30/92	612	60	500	10	2	3 No, 1 Yes
Oreg.	4/2/93	219	0	143	3	2.1	No
R.I.	11/22/91	34	0	29	0	0	No
S.C.	3/24/93	394	0	332	0	0	Yes
Tenn.	12/13/91	153	83	253	2	.8	Yes
Tex.	3/27/92	1915	0	693	44	6.3	Yes
Utah.	4/17/92	108	2	84	2	2.4	Yes
Wash.	7/17/92	279	0	64	3	6.8	No
Total		8,926	475	7,778	216		

Source: Data were obtained from agreement-state questionnaires as of June 30, 1993.

UPDATE OF DATA IN APPENDIX III TO
GAO/RCED-93-90

As a result of a meeting with GAO on June 28, 1993, we have attempted to verify the numbers contained in Appendix III of the April, 1993, Government Accounting Office (GAO) report, "Better Criteria and Data Would Help Ensure Safety of Nuclear Materials," wherever possible. Our results are contained in the enclosed table, which provides our best information alongside the GAO numbers.

In talking to the NRC Regions, we determined that there was some ambiguity about the information GAO was requesting, possibly due to differences in approach from Region to Region. As a result, the types of information provided by each Region may not have been the same. In assembling the information enclosed with this letter, we have attempted to minimize any questions of interpretation and to provide consistent data from NRC's various information systems.

We have included updated numbers on incidents or alleged incidents reported, total licenses, major licenses, licenses terminated, inspections conducted, inspections overdue and reciprocity notices received. We were not able to provide updated information on all the categories in the GAO table, primarily because the data is not maintained in our system and would require manual retrieval of the information. These include inspections conducted in response to incidents and alleged incidents, staff per hundred licensees, close out inspections, and reciprocity inspections.

ENCLOSURE 3

**Updated NRC FY 91 Data for
GAO Appendix III Table**

REGION	INCIDENTS OR ALLEGED INCIDENTS	
	REPORTED*	
	GAO	NRC
Region I	243	180
Region II	138	86
Region III	25	145
Region IV	92	108
Region V	25	15
TOTAL:	523	535

REGION	Total** Licenses		Major licenses***		Licenses Terminated	
	GAO	NRC	GAO	NRC	GAO	NRC
Region I	2700	2551	100	294	200	169
Region II	945	912	61	59	65	65
Region III	2593	2489	231	181	300	182
Region IV	820	796	116	55	123	73
Region V	319	243	17	21	29	29
TOTAL:	7377	6991	525	610	717	518

REGION	Inspections Completed		Inspections Overdue		Reciprocity Notices Received	
	GAO	NRC	GAO	NRC	GAO	NRC
Region I	613	1288	638	12	300	226
Region II	440	394	2	1	35	181
Region III	692	1163	25	48	50	4
Region IV	318	305	4	18	220	293
Region V	133	117	2	8	112	22
TOTAL:	2196	3267	671	87	717	726

- NRC data on incidents and alleged incidents derived from 1991 AEOD data on non-reactor events reported and 1991 Allegation Management System report.
- NRC data on total licenses derived from 1/8/92 printout of byproduct material licenses.
- NRC data on major materials licenses generated using definition contained in OSP questionnaire.



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-751678

June 1, 1993

The Honorable Ivan Selin
Chairman, Nuclear Regulatory
Commission

Dear Mr. Selin:

Enclosed are five copies of our report entitled Nuclear Regulation: Better Criteria and Data Would Help Ensure Safety of Nuclear Materials (GAO/RCED-93-90). This report was prepared at the request of the Chairman, Environment, Energy, and Natural Resources Subcommittee, House Committee on Government Operations.

This report contains recommendations to you. As you know, 31 U.S.C. 720 requires the head of a federal agency to submit a written statement of actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days from the date of this letter and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of this letter.

We appreciate the courtesies extended by your staff during our review.

Sincerely yours,


J. Dexter Peach
Assistant Comptroller General

Enclosures - 5

QUESTION 7 (b). The GAO recently released a report that was critical of NRC's agreement state program. GAO found that the NRC had not established any performance indicators for the agreement states, and did not have enough information to adequately monitor the performance of agreement states. GAO also found that the NRC had vague rather than specific criteria or procedures for suspending or revoking an agreement state program.

(b) How does the NRC know whether there is adequate protection of the public health and safety in agreement states?

ANSWER.

The NRC has reasonable assurance that the Agreement States are adequately protecting public health and safety by conducting reviews of each State program annually. A formal review covering all of the technical and administrative aspects of each State program is conducted approximately every other year. During the interim between formal reviews, staff visits each State program. A visit is a less formal evaluation of a State's program.

In evaluating Agreement State programs, 30 indicators are used to determine whether a State program is adequate to protect public health and safety. The 30 indicators (copy enclosed) cover six major areas: Legislation and Regulations, Organization, Management and Administration, Personnel, Licensing, and Compliance. In addition, the indicators are subdivided into two categories.

QUESTION 7(b). (Continued)

Category I indicators address program functions that directly relate to the State's ability to protect the public health and safety. If significant problems exist in several Category I indicator areas, then the need for improvements may be critical.

Category II indicators address program functions that provide essential technical and administrative support for the primary program functions. These indicators are essential in order to avoid the development of problems in one or more of the principal program areas, i.e., those that fall under Category I indicators.

If no significant Category I comments are provided, this indicates that the program is adequate to protect the public health and safety and is compatible with the NRC's program. If one or more significant Category I comments are provided, the State is notified that the program deficiencies may seriously affect the State's ability to protect the public health and safety and that the need for improvement in particular program areas is critical.

Enclosure:

As stated

ENCLOSURE
QUESTION 7(b)

May 28, 1992 "Guidelines for NRC Review of Agreement State Radiation Control Programs"

Category I - Direct Bearing on Health and Safety. Category I Indicators (and the Program Elements of which they are a part) are:

- o Legal Authority (Legislation and Regulations)
- o Status and Compatibility of Regulations (Legislation and Regulations)
- o Quality of Emergency Planning (Management and Administration)
- o Technical Quality of Licensing Actions (Licensing)
- o Adequacy of Product Evaluations (Licensing)
- o Status of Inspection Program (Compliance)
- o Inspection Frequency (Compliance)
- o Inspectors' Performance and Capability (Compliance)
- o Response to Actual and Alleged Incidents (Compliance)
- o Enforcement Procedures (Compliance)

Category II-Essential Technical and Administrative Support. Category II Indicators (and the Program Elements of which they are a part) are:

- o Location of Radiation Control Program Within State Organization. (Organization)
- o Internal Organization of Radiation Control Program. (Organization)
- o Legal Assistance. (Organization)
- o Technical Advisory Committees. (Organization)
- o Contractual Assistance (Organization)
- o Budget. (Management and Administration)
- o Laboratory Support. (Management and Administration)
- o Administrative Procedures. (Management and Administration)
- o Management. (Management and Administration)
- o Office Equipment and Support Services. (Management and Administration)
- o Public Information. (Management and Administration)
- o Qualifications of Technical Staff. (Personnel)
- o Staffing Level. (Personnel)
- o Staff Supervision. (Personnel)
- o Training. (Personnel)
- o Staff Continuity. (Personnel)
- o Licensing Procedures (Licensing)
- o Inspection Procedures (Compliance)
- o Inspection Reports (Compliance)
- o Confirmatory Measurements (Compliance)

QUESTION 7 (c). The GAO recently released a report that was critical of NRC's agreement state program. GAO found that the NRC had not established any performance indicators for the agreement states, and did not have enough information to adequately monitor the performance of agreement states. GAO also found that the NRC had vague rather than specific criteria or procedures for suspending or revoking an agreement state program.

(c) What type of authority does the NRC have to monitor the agreement state programs? Does the NRC make use of this authority? To what extent should the NRC monitor agreement states? Does the NRC need additional authority to effectively monitor the agreement states.

ANSWER.

The NRC has authority under Sections 161(c) and 274j of the Atomic Energy Act, as amended, to monitor the Agreement State programs. Section 274j. (1) provides the following:

"... The Commission shall periodically review such agreements and actions taken by the States under the agreements to insure compliance with the provisions of this section."

The NRC makes use of this authority by conducting routine reviews and visits to Agreement States as discussed in the response to 7(b).

QUESTION 7 (c). (Continued)

The NRC is presently reevaluating the extent to which Agreement States should be monitored. As discussed in response 7(a) and (b), we are working on the development of performance indicators in order to give us a reliable output measure of the effectiveness of the Agreement States in protecting public health and safety.

Section 274 provides adequate authority for the monitoring of the Agreement State program.

QUESTION 8. Given more opportunity to reflect on statements made at the June 30, 1993, NRC authorization hearing regarding 2.206 petitions, if the Congress was successful in passing legislation which would make 2.206 petitions judicially reviewable, please describe the kinds of resource implications the agency would expect to occur.

ANSWER.

The resource implications would depend on the scope of the legislation enacted. If the legislation were limited to making agency decisions in response to 10 C.F.R. 2.206 petitions judicially reviewable, the resource implications would presumably be minimal. During the years before the Supreme Court issued Heckler v. Cheney, the NRC averaged less than one lawsuit per year challenging a 2.206 decision. Each such lawsuit probably requires the expenditure of .1-.2 FTE. If the legislation were broader, and directed the NRC to grant 2.206 petitions if certain specified criteria were met, then substantial FTE would be required, because of the need to hold hearings on many issues that are currently satisfactorily resolved without public hearings. This could also result in diversion of the resources from higher priority safety issues.

QUESTION 9 (a) and (b).

Several nuclear power plants have decided to decommission before the expiration of their licenses.

(a) Does the NRC expect this to be the trend for other reactors?

(b) Which nuclear power plants does the NRC believe may undergo decommissioning prior to the expiration of their licenses?

ANSWER.

The NRC staff believes that some additional plants will shut down prematurely in the near future primarily because of economic considerations.

The NRC Five Year Plan for FY 94-98 states that a substantial number of reactor licensees are conducting economic analyses which could result in the permanent shutdown of several facilities during the planning period. While we have no specific information that any licensee is now planning such a decision in the near term, there have been recent indications that permanent shutdowns have been and are being seriously considered. For example:

- In the face of a disadvantageous Public Utility Commission ruling, Commonwealth Edison Company indicated in summer 1992 that the shutdown of one or two of their six nuclear stations might be required.

QUESTION 9 (a) and (b). (Continued) 2

- Northeast Utilities recently told the staff that if steam generators need to be replaced at their Haddam Neck facility, it would eliminate the slight cost advantage of keeping the unit in service for its 40 year licensed life.

- The Wisconsin Public Service Company recently made a decision to replace steam generators at their Kewaunee nuclear plant, but it was described as a close call between making the investment vs. shutting down in 1998.

Several public reports by industry observers have also indicated that there could be more premature shutdowns in the future. A 1992 article by NUKEM (a nuclear fuel supplier) named 23 nuclear units that might shut down after 40 years -- or sooner. The list includes mostly older, single unit sites.

A 1993 report by Shearson Lehman Brothers also speculates that as many as 25 units could face premature shutdown in the next several to 10 years.

Question 9 (c). For each nuclear power plant, how much money is currently available for decommissioning? How much money is needed to decommission each reactor and what is the shortfall, if any? Please provide this information by power plant, if possible.

Answer.

The NRC does not require its power reactor licensees to report the amount of funds currently available for decommissioning. Rather, the NRC intends to audit licensees periodically to determine whether or not they are collecting decommissioning funds at an adequate rate. Because the NRC deferred to licensees' public utility commissions and the Federal Energy Regulatory Commission to set the rates at which decommissioning funds would be collected and because most licensees are on at least a 3-year rate schedule, the NRC has not yet audited licensees with operating reactors. Consequently, except for those reactors that are currently undergoing decommissioning and have submitted decommissioning funding plans (see below), the NRC does not yet have its own information on how much money is currently available for decommissioning, either by individual reactor or collectively. When the NRC promulgated its decommissioning regulations in 1988,

QUESTION 9 (c). (Continued)

it required each power reactor licensee to certify that it would provide financial assurance for decommissioning in an amount at least equal to formula amounts specified in 10 CFR 50.75(c). These formulas vary according to the size and type of reactor and, pursuant to the definition of decommissioning in 10 CFR 50.2, do not include the cost of removal and disposal of spent fuel or of nonradioactive materials and structures. The licensee is required to update this amount annually for inflation such that, by the time it plans to permanently cease operation, it will have sufficient funds to decommission. Updated to 1993 dollars, the NRC formulas indicate that a typical, large PWR would cost about \$140 - \$160 million to decommission and a typical, large BWR would cost about \$170 - \$190 million to decommission.

Information available from private sources indicates that over \$4 billion has been collected so far in decommissioning trust funds. The enclosed chart, which draws upon information from private sources and has not been confirmed by the NRC, indicates the approximate estimated decommissioning cost for each reactor plus the amount accumulated as of October 1992 in each reactor's trust fund. This amount will continue to grow each year as additional funds and earnings on funds are deposited. As indicated above, the NRC has its own plant-specific information for those reactors that have permanently shut down and submitted their

QUESTION 9 (c). (Continued)

decommissioning plans or other preliminary decommissioning information. These reactors include Yankee-Rowe, Shoreham, Fort St. Vrain, Rancho Seco, and San Onofre 1. The estimates in the enclosed chart agree with estimates submitted to the NRC by licensees of the above plants. In most cases, these estimates exceed the estimates derived from the NRC generic formulas in 10 CFR 50.75. However, many of the licensee site-specific estimates include the costs of spent fuel storage and disposal and demolition of non-radioactive materials and structures which, as indicated above, are not included in the NRC formulas. When such costs are subtracted from licensee estimates, the site-specific and generic amounts generally converge.

All power reactor licensees submitted their certifications by July 27, 1990 as required. Virtually all power reactor licensees chose to use the financial assurance mechanism of an external sinking fund, in which deposits are made at least annually to a trust fund such that by the time a licensee expects to terminate operations, the total amount of funds in the external trust would be sufficient to pay decommissioning costs. Because all power reactor licensees have made the required certification and will update their certification amounts and, subsequently, their trust fund deposits, to account for inflation, the NRC does not expect that its reactor licensees will have significant

QUESTION 9 (c). (Continued)

decommissioning fund shortfalls. Additionally, the NRC will periodically reevaluate its decommissioning formulas and will adjust them accordingly, if necessary.

DECOMMISSIONING FUNDING STATUS

REACTOR FACILITY	FUNDING AMOUNT (\$M)	RELATION TO NRC FORMULA	CURRENT FUND TOTAL (\$M)	INSTRUMENT TYPE
ARKANSAS 1&2	184(1); 216(2)	GREATER	43(1); 35(2)	EXT. TRUST
BEAVER VALLEY 1&2	158 EACH	EQUAL	NOT GIVEN	EXT. TRUST
BIG ROCK POINT	184	GREATER	27	EXT. TRUST
BRAIDWOOD 1&2	153.6 EACH	EQUAL	8.6/YR EACH	EXT. TRUST
BROWNS FERRY 1-3	190 EACH	EQUAL	N.A.	STMT. OF INTENT
BRUNSWICK 1&2	218.3	GREATER	40(1); 53(2)	EXT. TRUST
BYRON 1&2	153.6 EACH	EQUAL	8.3/YR EACH	EXT. TRUST
CALLAWAY	354	GREATER	28	EXT. TRUST
CALVERT CLIFFS 1&2	275	EQUAL	64	EXT. TRUST
CATAWBA 1&2	192(1); 208(2)	GREATER	26 FOR ALL	EXT. TRUST
CLINTON	173	EQUAL	9.7	EXT. TRUST
COMANCHE PEAK	193.4	GREATER	11.6	EXT. TRUST
CONN. YANKEE	225	GREATER	104	EXT. TRUST
COOK 1&2	588 -1020	GREATER	125	EXT. TRUST
COOPER	134.1	EQUAL	7.1/YR	EXT. TRUST
CRYSTAL RIVER 3	293	GREATER	88.2	EXT. TRUST
DAVIS-BESSE	146	EQUAL	22	EXT. TRUST
DIABLO CANYON 1&2	414(1); 481(2)	GREATER	308	EXT. TRUST
DRESDEN 1-3	135.4(1) 176.9(2&3)	EQUAL	13.3/YR 2&3	EXT. TRUST
DUANE ARNOLD	277	GREATER	19	EXT. TRUST
FARLEY 1&2	184(1); 196(2)	GREATER	16	EXT. TRUST
FERMI 1&2	13.4(1); 192.4(2)	EQUAL	5.2(1); 14.8(2)	EXT. TRUST
FITZPATRICK	165	EQUAL	9.7	EXT. TRUST

FUNDING DATA FROM NUCLEAR POWER PLANTS ANNUAL UPDATE
OCTOBER 1992, PRUDENTIAL SECURITIES

DECOMMISSIONING FUNDING STATUS

REACTOR FACILITY	FUNDING AMOUNT (\$M)	RELATION TO NRC FORMULA	CURRENT FUND TOTAL (\$M)	INSTRUMENT TYPE
FORT CALHOUN	312	GREATER	42	EXT. TRUST
FORT ST. VRAIN	157.5	N.A.	32.5 + 125 LOC	EXT. TR. + LTR. OF CRDT.
GINNA	150.7	EQUAL	22.2	EXT. TRUST
GRAND GULF	249	GREATER	14	EXT. TRUST
HARRIS	206.6	GREATER	15.6	EXT. TRUST
HATCH 1&2	236(1); 311(2)	GREATER	5	EXT. TRUST
HOPE CREEK	437	GREATER	22	EXT. TRUST
HUMBOLDT BAY	80	EQUAL	51	EXT. TRUST
INDIAN POINT 1&2	N.A.(1); 274(2)	GREATER	92	EXT. TRUST
INDIAN POINT 3	135	EQUAL	7.5/YR	EXT. TRUST
KEWAUNEE	667.5 (FUT. \$)	GREATER	121.4	EXT. TRUST
LACROSSE	91	EQUAL	15.9	EXT. TRUST
LASALLE 1&2	187 EACH	EQUAL	9.5/YR EACH	EXT. TRUST
LIMERICK 1&2	217(1); 189(2)	GREATER	35	EXT. TRUST
MAINE YANKEE	176	GREATER	87	EXT. TRUST
MCGUIRE 1&2	171(1); 189(2)	GREATER	12	EXT. TRUST
MILLSTONE 1-3	315(1);238(2);333(3)	GREATER	172 FOR ALL	EXT. TRUST
MONTICELLO	277	GREATER	70	EXT. TRUST
NINE MILE POINT 1&2	240(1); 249(2)	GREATER	49	EXT. TRUST
NORTH ANNA 1&2	220(1); 224(2)	GREATER	61.6*	EXT. TRUST
OCONEE 1-3	165(1);158(2);203(3)	EQUAL	10	EXT. TRUST
OYSTER CREEK	163	EQUAL	49	EXT. TRUST
PALISADES	316	GREATER	27	EXT. TRUST

FUNDING DATA FROM NUCLEAR POWER PLANTS ANNUAL UPDATE
OCTOBER 1992, PRUDENTIAL SECURITIES

*OLD DOMINION ELECTRIC COOP. HAS PREPAID ITS SHARE OF NORTH ANNA

DECOMMISSIONING FUNDING STATUS

REACTOR FACILITY	FUNDING AMOUNT (\$M)	RELATION TO NRC FORMULA	CURRENT FUND TOTAL (\$M)	INSTRUMENT TYPE
PALO VERDE 1-3	250(1); 247(2); 263(3)	GREATER	88	EXT. TRUST
PEACH BOTTOM 1-3	18(1); 202(2&3)	GREATER (2&3)	35 (2&3)	EXT. TRUST
PERRY	194	EQUAL	8.5	EXT. TRUST
PILGRIM	328	GREATER	43.7	EXT. TRUST
POINT BEACH 1&2	120(1); 132(2)	EQUAL	193	EXT. TRUST
PRAIRIE ISLAND 1&2	190(1); 163(2)	EQUAL	144	EXT. TRUST
QUAD CITIES	132.8 EACH	EQUAL	9.7/YR EACH	EXT. TRUST
RANCHO SECO	292.9	GREATER	90	EXT. TRUST
RIVER BEND	401	GREATER	7.4	EXT. TRUST
ROBINSON	143.3	EQUAL	50	EXT. TRUST
SALEM 1&2	163(1); 273(2)	GREATER	66	EXT. TRUST
SAN ONOFRE 1	236.4	GREATER	200	EXT. TRUST
SAN ONOFRE 2&3	229(2); 299(3)	GREATER	321	EXT. TRUST
SEABROOK	280.2	GREATER	NOT AVAILABLE	EXT. TRUST
SEQUOYAH 1&2	150 EACH	EQUAL	N.A.	STMT. OF INTENT
SHOREHAM	188	GREATER	10 + 300 LOC	EXT. TR. + LTR. OF CREDIT
SOUTH TEXAS 1&2	213(1); 260(2)	GREATER	26.6	EXT. TRUST
ST. LUCIE 1&2	239(1); 201(2)	GREATER	108	EXT. TRUST
SUMMER	503 (FUT \$)	EQUAL	6.4	EXT. TRUST
SURRY 1&2	205(1); 256(2)	GREATER	68	EXT. TRUST
SUSQUEHANNA 1&2	215.8 EACH	GREATER	60	EXT. TRUST
THREE MILE ISLAND 1	136	EQUAL	14.5	EXT. TRUST
THREE MILE ISLAND 2	226.7	GREATER	37	EXT. TRUST

FUNDING DATA FROM NUCLEAR POWER PLANTS ANNUAL UPDATE
OCTOBER 1992, PRUDENTIAL SECURITIES

DECOMMISSIONING FUNDING STATUS

REACTOR FACILITY	FUNDING AMOUNT (\$M)	RELATION TO NRC FORMULA	CURRENT FUND TOTAL (\$M)	INSTRUMENT TYPE
TROJAN	488	GREATER	27	EXT. TRUST
TURKEY POINT 3&4	188(3); 221(4)	GREATER	57(3); 53(4)	EXT. TRUST
VERMONT YANKEE	214	GREATER	62	EXT. TRUST
VOGTLE	264(1); 329(2)	GREATER	5	EXT. TRUST
WNP2	135	EQUAL	NOT AVAILABLE	EXT. TRUST
WATERFORD	203	GREATER	13	EXT. TRUST
WOLF CREEK	206	GREATER	8	EXT. TRUST
YANKEE ROWE	247.1	GREATER	63	EXT. TRUST
ZION 1&2	151.5 EACH	EQUAL	10.7/YR EACH	EXT. TRUST

FUNDING DATA FROM NUCLEAR POWER PLANTS ANNUAL UPDATE
OCTOBER 1992, PRUDENTIAL SECURITIES

QUESTION 10.

If no new reactors are built and licensed, what does NRC project its personnel requirements and budget needs to be over the next 20 years? What will be the impact of these changes on the user fees?

ANSWER.

Approximately 54 percent of the NRC's FY 1994 budget is for our Reactor Programs, approximately 15 percent for Nuclear Material Programs, and approximately 31 percent for Management and Support. There are 109 reactors presently licensed to operate. During the next 20 years, the operating license for 32 reactors will expire. The NRC does not know how many of these reactors will renew their licenses or how many will be decommissioned. Therefore, it is difficult to project personnel requirements and budget.

Pursuant to the Omnibus Budget Reconciliation Act of 1990, the NRC is required to assess user fees that approximate 100 percent of its budget authority, less appropriations from the Nuclear Waste Fund, through FY 1998. Any significant impact on user fees would depend on the future action of the Congress with respect to this requirement.

QUESTION 11. How many FTE's does NRC project will be needed for the following activities associated with Yucca Mountain and for an MRS site: a) site investigations, b) co-operation with EPA on siting requirements, etc., c) construction, and d) operation?

ANSWER.

Based on DOE's schedule, the NRC will receive an application from DOE to construct a high-level waste repository in FY 2001 and complete its review in FY 2004. If DOE adheres to the current program and schedule, NRC will expend approximately 700 FTE's during the 11-year period from FY 1994-2004. This includes the review of DOE's site characterization activities at Yucca Mountain, cooperation with EPA on environmental standards (approximately 3 FTE's through FY 1995), development of NRC's regulatory framework and technical assessment capability, and review of DOE's license application for the high-level waste repository.

The NRC has not yet made detailed estimates of future resource requirements for regulating the construction and operation of this first-of-a-kind facility. However, it is expected that some reduction will occur after the licensing phase of the program as a result of completing efforts associated with developing the regulatory framework and technical assessment capability, including most research activities.

Due to the current uncertainties in the MRS program schedule, the following NRC FTE projections are approximate: (a) 3 FTEs per year for pre-licensing

QUESTION 11. (Continued)

activities until an application is received, (b) 6 FTEs per year (for two years) for licensing, and (c) 3 FTEs per year for construction and operational oversight.

QUESTION 12. For a hypothetical 1000 MWe reactor, how many FTEs are required for overseeing operation of the reactor versus overseeing decommissioning?

ANSWER.

On the average, the NRC expends approximately 15 FTE's per reactor each year to oversee reactor operation. This estimate includes all of the Reactor Program resources that are required for NRC efforts to conduct technical reviews, inspect operating reactors, maintain operating licenses, maintain regulations governing operation at reactors, conduct research activities to ensure continued safe operation, and assess reactor operating events and experience. This estimate can fluctuate depending on the performance of individual reactors. A number of these efforts are common to all reactors and thus are not solely dependent on the number of operating reactors. Contractor support (not included in the above estimate) also plays an integral part in the NRC oversight activities in areas such as the licensing of reactor operators or certain team inspections.

While a few reactors have undergone decommissioning, thus far in the NRC's history no commercial power reactor has been fully decommissioned. Thus, the agency has limited experience in the decommissioning process. As a result, it is difficult to project an accurate level of NRC resource requirements associated with either safe storage of the contaminated site or with overseeing the process necessary to make the site available for unrestricted use. With this in mind, the FTE estimates are as follows:

QUESTION 12. (Continued)

- One-time costs of approximately 3 to 5 FTEs required to review each decommissioning plan.
- Approximately 1 FTE required for radiological surveys prior to the site being made available for unrestricted use.
- Subsequent to the approval of the decommissioning plan, approximately 1 to 2 FTE's per reactor each year for inspections until the site is made available for unrestricted use. For the safe storage option, this could potentially require NRC site inspections for up to 60 years.

Question 13. NRC recently participated in a joint U.S.-Canada nuclear incident response drill. What lessons did the NRC learn from this exercise?

Answer.

This spring, the U.S. (and 15 other countries) participated in the First International Offsite Emergency Exercise (INEX-1). INEX-1 was developed and sponsored by the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD). Each participating country was supposed to conduct the INEX exercise independently; however, the U.S. and Canadian planners decided to cooperatively participate in each other's exercise(s) since that is the normal operating mode (at the Federal level) between the two countries.

Canada conducted a single exercise in response to the INEX effort, simulating a condition where the accident took place within their territorial boundaries (Canada as ACCILAND). Both the NRC and the EPA supported Canada's efforts as members of the Moderator Team. The U.S. decided to conduct two exercises--one as the country where the accident took place (ACCILAND) and one as the country adjacent to where the accident took place (NEIGHBORLAND). The NRC hosted the "U.S. as ACCILAND" exercise; EPA hosted the "U.S. as NEIGHBORLAND" exercise. The issues identified during the NRC's exercise (U.S. as ACCILAND) were as follows.

1. The U.S. and Canada have different national protective action levels. The individual States/Provinces can also have their own criteria.

QUESTION 13. (continued)

-2-

During an event such as that postulated in INEX, the Canadian authorities indicated that they would have implemented the U.S. protection recommendations.

2. Joint international media briefings will be necessary to ensure factually accurate and consistent information is disseminated to the media and the public.
3. Provisions are needed to ensure that unnecessary delays do not occur along evacuation routes that cross international boundaries.
4. The national policies concerning the stockpiling and predistributing of Potassium Iodide (KI) for the general public of the U.S. and Canada are different. This issue is being reviewed by a joint U.S.-Canada work group on emergency planning and preparedness.
5. Additional provisions are needed to improve the capability for promptly sharing radiation monitoring and assessment capabilities and facilities.
6. The responsibilities for processing low level waste deposited in "NEIGHBORLAND" need to be formalized.
7. The liability of ACCILAND (through the American Nuclear Insurers [ANI]) with respect to claims from neighborland for compensation in

QUESTION 13. (continued)

-3-

NEIGHBORLAND is uncertain. This issue is being reviewed for incorporation into the appropriate implementation mechanisms.

Question 14. In this exercise, was communication between the two governments or between our government and the states a potential problem? With what countries should we give priority to improving our communications capabilities in the event of a nuclear reactor incident?

Answer.

Communication between the U.S. and Canada and between the U.S. federal government and the states is not a problem. Internationally, emergency communication systems exist between the U.S. and Canada, the U.S. and the International Atomic Energy Agency (IAEA), and the U.S. and Mexico and the Bahamas. They are continually tested (5-10 times per year) during exercises and minor real events.

Emergency communications between the federal government and States is tested biennially. Additionally, these communication channels are exercised about 20 times per year during minor real events. Due to the frequent testing and joint emergency planning programs, the implementing procedures are well known and the emergency response personnel are familiar with each other. This is essential to ensuring an effective response capability during an actual emergency condition.

Improved communications capabilities in connection with a nuclear incident in Cuba and/or the Russian Federation may need to be considered in the future.

Question 15. Are the different classification schemes used by the U.S. and Canada or other countries a potential problem in responding to a nuclear incident?

Answer.

No. U.S. and Canadian responders are aware of the differences in their schemes and practice with each other in their respective uses. Similar exercises are conducted with Mexico, the Bahamas, and the International Atomic Energy Agency (IAEA). Because of this, there should not be any untoward problems with responding to a nuclear incident.

Question 16. Would you please provide a table comparing the initial reports of the severity of a nuclear incident with the final analysis of the severity of the incident for both U.S. and international reactors. What countries, if any, have systematically downplayed the severity of nuclear incidents in their initial statements?

Answer.

The International Atomic Energy Agency (IAEA), in conjunction with the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD), has developed the International Nuclear Event Scale (INES) as a means to promptly and consistently communicate to the public the safety significance of events at nuclear facilities. The INES was developed in response to perceived problems in some member nations regarding a lack of openness with the media and the public. It is not intended to be used for emergency response decisionmaking or for technical purposes.

The NRC has committed to limited participation in the program for a two year trial period. The NRC is limiting its participation by only classifying and submitting an event rating form to the IAEA for events at commercial nuclear power plants that are classified as an alert or higher on the emergency response scale used in the United States. The NRC delays assignment of an INES level number for about a week after event termination to prevent any confusion with U.S. emergency classification.

QUESTION 16. (Continued)

-2-

The NRC decision to not fully participate or adopt the IAEA numerical scale is based on the existence in the U.S. of a well established and tested emergency classification system which combines event reporting with an emergency response scale. It includes extensive and open communications with the public and media. Full implementation of the IAEA information scale, which differs from the technical reporting requirements and emergency response classifications required for U.S. nuclear facilities, would introduce a potential for confusion and could actually hamper effective communications. To provide a technical assessment of safety significance, the NRC analyzes the specific risk posed by individual plant events. The resultant safety significance is expressed as a conditional core damage probability. This methodology is internationally recognized as superior with respect to technical purposes and considerations.

The NRC has ratified the Early Notification and Assistance conventions, which were formally approved by the IAEA General Conference in September 1986. These conventions provide for an international exchange of information, data, and assistance during a nuclear accident or serious radiological emergency.

Since 1990, when many countries first started using the INES classification scheme, over 200 events have been rated on the INES scale. In only three instances was the INES rating upgraded from a lower classification (less serious) to a higher classification (more serious). These instances involved separate events in three different countries. INES ratings were upgraded after investigation revealed further degradation in the level of defense in

QUESTION 16. (Continued)

-3-

depth (i.e., safety culture deficiencies or additional equipment failures that were not evident at the time the initial report was prepared). There have been no instances where an event in the U.S. was upgraded.

Enclosed is a summary table of the INES reports received concerning international nuclear events since the NRC started participation in the program. The table also includes five U.S. reactor events submitted by the NRC to the IAEA. The rating of an event on the INES scale runs from zero for events with no safety significance to seven for a major accident. A synopsis of the INES rating methodology is also provided.

Enclosure:

Summary Table

QUESTION 16.

Enclosure

SUMMARY TABLE OF INTERNATIONAL NUCLEAR EVENT REPORTS

Country	Event Facility	Date	Scale	Comments
BANGLADESH	TRIGA REACTOR	02/02/93	2	
BANGLADESH	TRIGA REACTOR	07/30/92	2	
BELGIUM	FBFC	11/28/92	2	
BRAZIL	ANGRA-1	03/05/93	1	
CANADA	BRUCE-A & B	03/05/93	1	
CANADA	DARLINGTON-2	02/15/93	1	
CZECH REP	DUKOVANY	01/11/93	0	
CZECH REP	DUKOVANY	08/02/93	OOS	
FINLAND	LOVIISA-2	02/25/93	2	
FRANCE	CADARACHE	06/21/93	2	
FRANCE	LUNEVILLE	03/11/93		
FRANCE	PALUEL-2	01/20/93	2	
INDIA	MAPS-1	10/13/92	0	
INDIA	MAPS-2	01/16/93	0	
INDIA	MAPS-2	09/16/92	1	
INDIA	NAPS-1	03/31/93	3	
INDIA	NAPS-2	02/27/93	1	
INDIA	RAPS-2	01/17/93	0	
INDIA	RAPS-2	09/17/92	1	
INDIA	TAPS	08/21/92	1	
INDIA	TAPS-1	10/16/92	0	
LITHUANIA	IGNALINA-1	11/04/92	0	
LITHUANIA	IGNALINA-2	10/15/92	1/0	* CHANGED FROM 1 TO 0
RUSSIA	BELOYARSKAYA	12/23/92	2	
RUSSIA	CHELYABINSK-65	07/17/93	1	
RUSSIA	KOLA-1	11/17/92	2	
RUSSIA	KOLA-1,2,3,4	02/02/93	2/3	* CHANGED FROM 2 TO 3
RUSSIA	TOMSK-7	04/05/93		
SLOVENIA	KRSKO	03/03/93	0	
SLOVENIA	KRSKO	11/10/92	0	
SWEDEN	BARSEBACK-2	07/28/92	1/2	* CHANGED FROM 1 TO 2
SWEDEN	OSKARSHAMN-1	02/24/93	1	
SWEDEN	RINGHALS-1	01/23/93	0	
SWEDEN	RINGHALS-1	02/28/93	0	
SWEDEN	RINGHALS-1	03/02/93	0	
SWEDEN	RINGHALS-2	01/01/93		
UK	DOUNREAY	06/29/93	2	
UK	SELLAFIELD	05/18/93	2	
UK	SELLAFIELD	09/08/92	3	
UK	SELLAFIELD	09/08/92	1/3	* CHANGED FROM 1 TO 3
UK	SELLAFIELD	12/02/93	1	
UK	SELLAFIELD	12/02/93	1	
UKRAINE	CHERNOBYL-3	03/18/93	0	
UKRAINE	ZAPORozHYE-1	06/14/93	2	
UKRAINE	ZAPORozHYE-5	05/21/93	OOS	
USA	NORTH ANNA-2	04/24/93	0	
USA	PALO VERDE-2	03/14/93	1	

QUESTION 16. (Continued)

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Enclosure

SUMMARY TABLE OF INTERNATIONAL NUCLEAR EVENT REPORTS

Country	Event Facility	Date	Scale	Comments
USA	PERRY-1	03/26/93	OOS	
USA	THREE MILE ISLAND-1	02/07/93	OOS	
USA	ZION-2	03/15/93	0	
VIETNAM	MICROTRON	11/17/92	2	

OOS = OUT OF SCALE

Question 17. What efforts have been made to ensure that the public and political leaders both of this country and of other countries (in the event that the release is from a U.S. reactor) are informed of response activities in a timely manner? Does NRC include such concerns in its exercises or in exercises in which it participates?

Answer.

The NRC and the Canadian Atomic Energy Control Board (AECB) have entered into a bilateral agreement which includes provisions for notification and communications in the event of a radiological event in their respective jurisdictions. The NRC and the Mexican National Commission for Nuclear Safety and Safeguards (CNSNS) have entered into a similar bilateral agreement. In addition, the United States is a party to the International Convention on Early Notification of a Nuclear Accident, thus providing a communications channel to the entire international community. At the State/Provincial level, contiguous States and Provinces have arrangements for immediate notification and continuous communications.

The criteria for notification in the Canadian agreement is, "any significant radiological event, accident or emergency." In the Mexican agreement, it is "accidents covered in the International Conventions on Early Notification of a Nuclear Accident and on Assistance in the Case of a Nuclear Accident or Radiological Emergency." In practice, either of these notifications would be provided whenever there is a potential for a release affecting the other country. In addition, the NRC provides Canada and IAEA with information via

QUESTION 17. (continued)

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electronic mail on any event for which the NRC activates its Operations Center. National level government authorities (NRC) notify the National level government authorities of neighboring countries (AECB). The U.S. Department of State makes the initial notification to international organizations (IAEA). Subsequent information is provided directly from the NRC to IAEA.

Nuclear plant management makes the initial notification to the neighboring provinces. Local authorities (States) provide subsequent information to the neighboring provinces. A procedure, including a Notification Form, has been developed which includes the name and location of the facility, the event date and time, emergency class, NRC response mode, description of the event, and whether there is a release. The notification also addresses whether there is media interest, public interest or Congressional interest.

State authorities will receive direct notification of an accident with transborder effects in that State from the respective Mexican State or Canadian Provincial authorities. The NRC will receive direct notification of an accident with transborder effects from Mexican or Canadian national level government authorities. The U.S. Department of State, the NRC, the U.S. Department of Energy and the U.S. Environmental Protection Agency may receive notification from IAEA of an accident that occurs in another country.

As stated in response to question 14, the NRC exercises communications procedures several times per year.

QUESTION 18. Texas has offered Vermont the use of its low-level waste disposal site. What problems do you foresee that Vermont could experience in obtaining permission to use this site and to ship its waste cross-country?

ANSWER.

Legislation to establish the Texas Low-level Radioactive Waste Disposal Compact was signed by Texas Governor Ann Richards on June 9, 1993. Texas, Maine, and Vermont are named as the initial party States, with Texas designated to be the host State. The legislation provides that if either Maine or Vermont ratify the compact, the agreement will be in full force for Texas and the ratifying State. Following State approval, the compact must be approved by the U.S. Congress. At this time, we are not aware of any problems that would negatively impact the enactment of ratifying legislation by Vermont or approval by Congress.

Further, NRC knows of no conditions which would limit the ability of generators in the State of Vermont to safely ship low-level radioactive waste (LLW) to Texas. Generators in the State of Vermont, as well as generators in all the non-sited States, have safely shipped LLW out-of-State for disposal for many years (e.g., to Barnwell, South Carolina).

STATEMENT BY DAVID C. WILLIAMS, OFFICE OF THE INSPECTOR
GENERAL, NUCLEAR REGULATORY COMMISSION

I am pleased to submit the statement of my fiscal year (FY) 1994 budget request and my FY 1995 budget estimates for the Office of the Inspector General (OIG) of the U.S. Nuclear Regulatory Commission (NRC). The NRC is a regulatory agency, whose mission is to ensure that civilian uses of nuclear materials in the United States are carried out in a way that adequately protects public health and safety, the environment, and our national security.

My office was established in accordance with the Inspector General Act Amendments of 1988. Our mission is to prevent and detect fraud, waste, and abuse in the NRC's programs and operations, and to identify ways to improve their economy and efficiency. We are also charged with the responsibility of ensuring that the NRC employs sound financial management practices, as required by the Chief Financial Officers Act of 1990. During this past year, both the audit and investigative programs have continued to produce results consistent with these important legislative mandates.

Our program findings this year have suggested the presence of agency-wide problems in the area of financial management and concerns with certain regulatory programs. For example, audit findings revealed that the agency paid for substantial contract services without the required approvals and verification of invoices. In addition, over \$8 million was unnecessarily "tied up" as contract obligations that could have been used for other program initiatives. To its credit, the NRC has performed a substantial body of work in response to these findings. In safety-related areas, an investigation revealed that the agency relied on unverified nuclear industry test results when it accepted the use of the fire-barrier material known as Thermo-Lag. This material is now used in about 80% of our nation's nuclear power plants. In 1992, the NRC informed the industry that Thermo-Lag should be treated as inoperable.

During FY 1994 and FY 1995, we will continue to assist the NRC by reviewing programs and operations and will work with them to resolve these and other financial and management deficiencies. To accomplish this in FY 1994, I am requesting \$4.8 million and 42 FTEs. This represents about a \$200,000 increase over last year and an increase of one FTE. The estimated requirements for FY 1995 are \$5.0 million and 43 FTEs, which represents an increase of \$200,000 and 1 FTE.

The additional FTE in FY 1994 will be used to support my office with independent legal counsel. The Inspector General Act provides us with the authority to hire the necessary employees for carrying out the functions, powers, and duties of my office. The OIG must be an objective and independent unit in order to effectively evaluate the agency. This position is particularly important due to the nature and complexity of our existing investigative case work. Independent legal counsel is necessary to ensure that no conflict of interest arises between the agency and the OIG and to allow the OIG to properly fulfill its statutory duties and responsibilities.

Senator Glenn and other members of Congress have made it unquestionably clear that the Inspector General Act of 1978, as amended, provides an Inspector General with the authority to employ such officers and employees as may be necessary for carrying out the functions, powers, and duties of an OIG. I believe that to properly carry out my statutory responsibilities, it is necessary for me to employ an independent counsel. I am, therefore, requesting one FTE for an attorney/advisor position.

Now, I would like to highlight some of our audit and investigative activities performed over the past year.

During 1992, several OIG audits and internal NRC studies found serious breakdowns in NRC's internal management controls. When these breakdowns occur, senior managers lack adequate assurance that activities under their purview are operating efficiently, effectively, and economically as required by directives. Furthermore, because internal controls are designed to protect the Government's resources, breakdowns can lead to fraud, waste, and abuse.

To achieve the necessary safeguards, the Federal Managers' Financial Integrity Act (FMFIA) and the Chief Financial Officers Act require Federal managers to establish and maintain effective systems of internal management and system controls. These requirements are augmented by Office of Management and Budget and agency directives. Simply defined, internal management controls are measures to safeguard resources, ensure compliance with applicable laws, and promote efficient and eco-

nomical operations. These controls apply to virtually all agency programs and activities, as well as to NRC's accounting and financial management systems.

In a recently issued summary analysis, we reported that breakdowns in management controls exist and are a common problem found in many of our recent audits. In three areas—computer security, payments made to privately operated national laboratories, and the agency's general financial ledger—our audits found deficiencies serious enough to warrant reporting as material weaknesses in the agency's annual FMFIA report to the President and Congress. As a result, we concluded that the Chief Financial Officer should consider additional actions to ensure that management controls are viewed as an important responsibility for senior managers rather than as a tertiary, low priority task.

A March 1993 audit report disclosed problems concerning the placement of work at the Department of Energy's (DOE) national laboratories by NRC's Office of Nuclear Regulatory Research. Through an interagency memorandum of understanding, the NRC initiates major contracts with DOE for research projects. Our audit report included the following findings: NRC contracts with DOE for laboratory services were not closed out upon completion; NRC managers could not adequately account for NRC-funded property and equipment at the laboratories; funds from prior fiscal years were improperly transferred from project to project by NRC managers without the required approval of the Office of the Controller; and final DOE laboratory performance on projects was not evaluated as required. Additionally, management tools for tracking project status were lacking. For example, NRC could not determine the completion status for 1,400 projects begun since 1975.

We made specific recommendations that collectively were designed to strengthen NRC's management of work placed at DOE laboratories to ensure that NRC's limited resources were adequately protected.

In August 1992, audit findings disclosed that NRC made payments to DOE laboratories since 1986 without reviewing or approving the associated invoices and verifying the accuracy of the payments. Such review and approval is required by the General Accounting Office, the Treasury Department, and NRC guidance. This failure to follow statutory and prescribed agency policies and procedures left NRC vulnerable to fraud, waste, and abuse. NRC management took prompt and decisive actions to correct these deficiencies.

Furthermore, the backlog of contract closeouts had increased despite earlier reports identifying the scope of the problem. In a June 1992 audit, we reported that NRC's inventory of completed, but not yet closed, contracts increased from 591 in May 1986 to 829 as of October 1991.

My office estimated that more than \$8 million was unnecessarily tied up by the contract closeout failure and could be made available for other NRC programs. In following our recommendations, NRC has deobligated over \$6 million to date and has made significant progress toward reducing the backlog.

In our investigative program, we are continuing to experience an increased level of activity. During FY 1992, we received 296 allegations of wrongdoing, which resulted in 93 cases being opened for investigation. Also in FY 1992, my investigative staff closed 90 cases. We project, based on the number of allegations received during the first 3 months of this fiscal year, that the FY 1993 case load will be even larger. These statistics demonstrate an increase in program activity for the third consecutive year since the inception of my office in 1989.

One of the more significant issues over the past year was an allegation that Thermo-Lag, the fire barrier material used in most nuclear plants to protect safety and emergency shutdown electrical circuits from fire, is inadequate. This allegation resulted in an inspection to address the adequacy of NRC staffs' performance related to the acceptance and review of Thermo-Lag. In addition, the investigative staff, in coordination with the NRC's Office of Investigations, initiated a related investigation to determine if there was any criminal activity by NRC or licensee employees in connection with the testing of this material.

While the investigation is still ongoing, the inspection has been completed and it was determined that the NRC staff did not conduct an adequate review of fire endurance concerning the ability of the fire barrier material. Had the staff conducted a thorough review of test reports submitted by industry or verified test procedures and results, a number of problems with the test program and the material would have been discovered.

Another important case involved allegations by a former officer of a consulting services firm, which also handles radioactive material, that safety concerns brought to NRC attention were not properly addressed. The OIG's investigation disclosed that

while NRC conducted an inspection based on the issues raised, the allegations were not fully and adequately examined. During the course of this investigation, a second inspection was conducted by NRC staff and seven regulatory violations were uncovered.

A highly significant aspect of this case is that the licensee employee who brought the safety concerns to NRC's attention was fired by the company. The firing was allegedly in retaliation for the employee raising his concerns with management prior to advising the NRC. This matter is being examined, along with other instances involving the firing of employees who raised safety concerns to their employers or to NRC management. Our purpose is to determine the adequacy of policies and procedures in place to protect the identity of whistleblowers and the adequacy of sanctions imposed against companies who engage in reprisals.

The OIG's investigative office continues to review allegations and initiate investigations involving medical uses of nuclear materials. In addition to the many cases of this nature that have already been addressed, we recently opened a number of inspections and investigations pursuant to our participation with an NRC Incident Investigation Team (IIT). The IIT was formed to investigate whether a misadministration of a radioactive pharmaceutical for treatment of a cancer patient contributed to her death. This office is attempting to determine if the licensee in this case had been adequately inspected by the NRC. This case also addressed a specific allegation involving a personal relationship between the licensee and an NRC employee involved in the licensing process.

In addition to investigations where public health and safety issues were of paramount importance, my office investigated a number of allegations involving personal relationships between NRC employees and NRC contractors. Many of these cases contained potential criminal aspects in that gratuities were received or administrative aspects in that there was a personal relationship between a person in a position to affect the contract and the contractor. This area will continue to be monitored very closely not only in response to specific allegations of wrongdoing, but also from a programmatic viewpoint. These are issues of constant concern on the part of senior management within the agency. We will continue to closely examine all allegations with serious consideration regarding the integrity of regulations.

Finally, from a financial standpoint, in FY 1992 our investigators continued to be alert for cases appropriate for application of the Program Fraud Civil Remedies Act. In the near future, the largest dollar volume case investigated by my office to date under this statute will be adjudicated.

This concludes my report to you on the activities of the past year and the current status of our operation. My office continues to enjoy a positive relationship with NRC management and we appreciate their ongoing support and cooperation. The agency complies fully with our investigative and audit inquiries, and NRC management has consistently accepted and implemented our recommendations to improve agency operations.

The challenge of providing assurance to the NRC on these vital, complex programs is great. We look forward to assisting the agency in continuing to improve the economy and efficiency of its programs and operations. Thank you for the opportunity to discuss our programs.

STATEMENT OF BILL MAGAVERN AND JAMES RICCIO, PUBLIC CITIZEN'S CRITICAL MASS ENERGY PROJECT

Good Morning, Mr. Chairman and members of the Subcommittee. Thank you for inviting Public Citizen's Critical Mass Energy Project to testify regarding the Nuclear Regulatory Commission (NRC) authorization. We are particularly grateful for the opportunity to present our opinions regarding the need for judicial review ability of NRC denials of "show cause" or 2.206 petitions.

Public Citizen is a non-profit, non-partisan organization whose objectives include safeguarding the public health and welfare and educating the public about issues that affect their health and safety. Public Citizen has over 140,000 members nationwide. Since its founding in 1974, Public Citizen's Critical Mass Energy Project has been a strong advocate of clean, safe and renewable sources of energy and a critic of the nuclear industry. I am director of Critical Mass. With me is James Riccio, also of Public Citizen's Critical Mass Energy Project.

JUDICIAL REVIEW ABILITY of 2.206 or "SHOW CAUSE" PETITIONS

The Subcommittee has asked Public Citizen to address the question of whether NRC denials of 2.206 or "show cause" petitions should be judicially reviewable.

Public Citizen believes that such legislation would constitute a first step in returning public participation to the regulation of nuclear reactors.

The Atomic Energy Act of 1954 provides for extensive public participation in the licensing of nuclear reactors. However, recent actions by the NRC have seriously limited the public's ability to participate in the licensing, relicensing and regulation of nuclear reactors.

The Commission has successfully limited the opportunity for a hearing after the construction of a nuclear power plant (a decision that was codified by Congress); limited the scope of license renewal proceedings and raised the threshold for admissibility of interveners' contentions. Once a nuclear reactor has been licensed to operate the ability of the public to participate in the regulation of that reactor is practically nonexistent. The only opportunity for the public to question the operation of a nuclear reactor is through a 2.206 or "show cause" petition.

Under the Commission's regulations, any person may request that the NRC institute proceedings requiring licensees to "show cause" why their licenses should not be modified, suspended or revoked (10 CFR 2.202, 2.206). Unfortunately, it has been the practice of the Commission to summarily deny citizen's "show cause" petitions. Between 1985 and the end of 1991, the NRC staff issued 93 director's decisions on "show cause" petitions regarding nuclear reactor safety. The NRC staff rejected every petition. In only one case, involving the Yankee Rowe reactor, has the commission exercised its jurisdiction over a "show cause" petition and reviewed the staff's decision. (Curran, *The Public as Enemy: NRC Assaults on Public Participation in the Regulation of Operating Nuclear Power Plants*, Union of Concerned Scientists, April 1992, p. 24.)

In a 1990 case, *Nuclear Information and Resource Service v. NRC*, the Commission attempted to argue that the public's right to bring a "show cause" petition was an adequate substitute for the public's right to a hearing under section 189 (a) of the Atomic Energy Act. However, Commission attorneys failed to come up with a single instance in which a "show cause" petition raising safety concerns had been granted since the early 1980s.

In testimony given a year later, the NRC admitted that it had allowed only TWO hearings in response to THREE HUNDRED AND TWENTY ONE requests under section 2.206 in the more than 10 years that the regulation had been on the books. (*Hearings Before the House Subcommittee on Energy and Power, House Committee on Energy and Commerce*, 102d Cong., 1st session, May 8, 1991, p. 743-744). This hardly constitutes a right to a hearing envisioned under section 189 (a) of the Atomic Energy Act and makes a joke of the notion of public participation in the regulation of nuclear reactor.

By the Commission's own admission, it is evident that the NRC has almost always denied to the public that which it is expressly authorized to seek under the regulations—proceedings against the licensee. In its defense, the NRC has argued that "show cause" petitions have been granted in whole or in part about 10 percent of the time because they result in some regulatory action being taken. This claim is impossible to substantiate. Since the NRC failed to institute a proceeding against the licensee, there is no public record.

Even if we take the Commission at their word, the NRC fails to act upon nine out of 10 "show cause" petitions. This can hardly be considered meaningful public participation.

The Union of Concerned Scientists has studied the Commission's handling of 2.206 petitions. The study found that, even in the rare instance where the Commission did not reject the "show cause" petition, little if any meaningful public participation occurred. UCS found that the NRC followed a "pattern of delaying (a) ruling on the petitioners requests for hearings until it could make a plausible claim that its own, private interactions with the licensee had yielded sufficient improvement to justify denial of the hearing requests." (Curran at p. 15.)

Absent judicial review, it is abundantly clear that the NRC will continue to deny most if not all show cause petitions, with little or no concern that it will be held accountable for its decisions.

The Commission's handling of "show cause" petitions has been insulated from review by the Supreme Court's decision in *Heckler v. Chaney*. (470 U.S. 821 (1985)). In its decision, the Court held that agency decisions not to undertake enforcement proceedings are presumptively unreviewable under the Administrative Procedure

Act (APA). Since 1985, the Commission's attorneys have used the decision in *Heckler v. Chaney* to avoid judicial review of 2.206 petitions.

However, in *NIRS v. NRC*, a case which questioned the NRC's "one-step" licensing process, the *en banc* D.C. Circuit decided that NRC denials of 2.206 petitions which raised significant new safety issues prior to plant operation would be judicially reviewable. The D.C. Circuit purposefully distinguished between 2.206 petitions for enforcement and those 2.206 petitions which arose in the context of licensing a new reactor under 10 CFR part 52.

However, there is no rational basis for this distinction. Why should 2.206 petitions which are filed prior to reactor criticality be reviewable and those which are filed once the reactor is running be exempted from review? The public's interest in the safety of a reactor is no less deserving of judicial review after a reactor is operating. Basically, those who file 2.206 petitions prior to operation and those who use the regulation after a reactor has been licensed are asking for the same thing! Since under the new "one-step" licensing scheme combined licenses will be issued prior to construction, both petitioners would be requesting action upon a license which has already been granted.

Public Citizen believes that the judicial review of Nuclear Regulatory Commission decisions on petitions for enforcement action is necessary, in part, to provide consistency in the treatment of "show cause" or 2.206 petitions.

The legislation you've introduced Mr. Chairman, if enacted into law, will give some measure of accountability to a regulatory body that has been called a "Rogue agency" by your college Senator Kennedy and is better known for its coziness with the nuclear industry than for its tenacity as a regulator. The Nuclear Enforcement Accountability Act of 1993 will accomplish its goal only if the Commission opens its regulatory process and actually grants a request to institute a proceeding when the applicable criteria have been met. The language of the act should reflect Congress's intent that 2.206 petitions that meet the criteria enunciated in the act will result in proceedings which are open to the public. Therefore, we recommend that the bill require that the NRC "must grant" a 2.206 petition which meets the applicable criteria by instituting a "show cause" proceeding. By doing so Congress can avoid the problem of NRC claiming to have granted a 2.206 petition merely by having acknowledged the problem and taking whatever action it deems appropriate.

The Chairman's legislation sets up an arbitrary and capricious standard by which to judge NRC denials of 2.206 petitions by cross referencing the Administrative Procedure Act. However, given the deference shown to administrative agency decisions by the federal bench, enunciating an arbitrary and capricious or an abuse of discretion standard in the legislation itself would serve to unequivocally manifest the intent of Congress.

Providing for the review ability of 2.206 petitions will by no means open the flood gates of litigation. The Chairman's bill sets a standard for granting petitioners' requests that is higher than the standard set by the proposal approved unanimously last year by the House Interior Committee. The requirement that petitioner "demonstrates material evidence reasonably indicating" significant noncompliance or a substantial hazard will serve to screen out any frivolous petitions that may be filed.

Furthermore, history shows that prior to the decision in *Heckler v. Chaney*, when 2.206 petitions were thought to be reviewable, the NRC was not overly burdened by judicial review of denials of "show cause" petitions. Any argument to the contrary is specious given the disproportionate resources of the Commission and the citizen petitioner. The great majority of citizen petitioners do not have the time, money or resources to challenge denials of 2.206 petitions.

Natural Resources Defense Council (NRDC) and Westview Publishing will soon be releasing a book entitled *Controlling the Atom in the 21st Century*. Part of the book examines the legal and administrative barriers to public participation posed by the 2.206 process. Its author argues that judicial review ability of the Commission's denials of 2.206 petitions would not "unduly infringe on the Commission's administrative prerogatives. . . . Indeed it appears that there are no cases in which a reviewing court even remanded a Commission ruling on a 2.206 petition for a fuller explanation, let alone one in which a court ordered the agency to take an action which it did not regard as appropriate."

Given the history of the Nuclear Regulatory Commission's denial of 2.206 petitions the current process fails to provide the opportunity for public participation envisioned by the regulation. Making these denials reviewable may make the Commission think twice before denying the public a hearing and may make the NRC more accountable. Mr. Chairman, we applaud your introduction of the Nuclear Enforce-

ment Accountability Act, cosponsored by Sen. Baucus, and we are ready to help you enact it into law.

LICENSE RENEWAL

The need for judicial review of 2,206 petitions is especially pressing given the limiting of citizen participation in other areas of nuclear reactor regulation. As noted earlier, the NRC has limited the scope of license renewal proceedings. Rather than providing a forum in which to determine whether a reactor is safe enough to continue operating for an additional 20-40 years, the license renewal hearing purposefully narrows the scope of the hearing to only those age-related issues that are "unique" to the license renewal term. The NRC is neither going to review the documents which constitute the "current licensing basis" nor confirm that the reactor is in compliance with the regulations imposed under the current license.

The NRC regulatory approach to nuclear power plant license renewal is premised on the opinion that "with the exception of age-related degradation, the current licensing basis for each reactor provides and maintains an acceptable level of safety for operation during any renewal period." In other words, the NRC is simply asserting that all existing reactors are safe enough; when in fact many reactors do not even meet their "current licensing basis."

The assertion is based upon the specious argument that because a reactor has operated without a meltdown for 20 years its safety level is adequate for 20, 40 or 60 years more. This argument does not stand the tests of logic or reality. Hal Lewis, Subcommittee Chair of the NRC's Advisory Committee on Reactor Safeguards, has stated that:

the general argument that the fact that one has operated safely for a finite period of time proves that the safety level is adequate is just not statistically right, because there isn't that much history in the industry. And it's a trap. Because other agencies, for example, people have used the argument that they had 24 successful Shuttle flights, to show the level of safety was adequate. And in retrospect, after one disaster, it turned out not to be. The Soviets, after Chernobyl, suddenly discovered that the level of safety they had before Chernobyl was not adequate. But the day before Chernobyl they would have said it was adequate on the basis of operating history.

(Advisory Committee on Reactor Safeguards, Subcommittee on Regulatory Policies and Practices: License Renewal, ACRS-T-1789, March 26, 1990, pp. 153, 154.)

The 2,206 petition will be the only means for the citizen intervener to question the adequacy of the nuclear reactor license in the renewal term. If the NRC thought it would be held accountable by a reviewing court, perhaps the Commission would not so readily dismiss petitioners requests for "show cause" petitions.

REACTOR AGING

The NRC is expending its resources in an effort to extend nuclear power plant operating licenses beyond the current 40 years. However, no nuclear reactor has ever lasted that long. The NRC's two lead plants in this effort have run into troubles. Yankee Rowe, the lead pressurized water reactor, was shut down because of questions about the strength of its reactor vessel. When it became apparent that it would be too expensive to justify further operation the utility permanently closed the reactor. Monticello, the lead boiling water reactor, subsequently withdrew from the program.

Other reactors are experiencing premature aging due to the effects of prolonged exposure to radiation. The NRC has singled out 15 reactors which need further testing to prove that the reactor vessel, the crucible which holds the radioactive fuel, is not so embrittled by radiation that it will crack during an accident. These reactors include:

- Arkansas Nuclear One, Russellville AR
- Cstal River, Red Level, FL
- Robert E. Ginna, Ontario, NY
- Nine Mile Point 1, Scriba, NY
- Oconee 1 & 2, Seneca, SC
- Oyster Creek 1, Forked River, NJ
- Point Beach 1 & 2, Two Creeks, WI
- Robinson, Hartsville, SC
- Three Mile Island 1, Londonberry Twp, PA
- Turkey Point 3 & 4, Florida City, FL
- Zion 1 & 2, Zion, IL

In light of this and other serious safety problems, the NRC's resources would be better spent ensuring the safe operation of nuclear power plants under their current licenses, rather than looking ahead to a renewal process that is still hypothetical.

DEREGULATION

The Nuclear Regulatory Commission is forging ahead with an initiative to "eliminate requirements marginal to safety". This effort was initially undertaken in response to George Bush's election-year deregulatory gambit, despite the fact that the NRC, as an independent agency, was not required to respond to the then President's directive. In 1993 the NRC still seems to be stuck in the Bush-Quayle mode of weakening important health and safety regulations at the behest of industry.

At a public workshop held April 27 and 28, the NRC and the industry presented a plan to move from current regulations to "performance-based" regulations. The areas slated for deregulation by the industry, Commission and staff are: containment leakage testing, fire protection, combustible gas control systems, requests for information, quality assurance, environmental qualification of electrical equipment and physical protection requirements for power reactors.

While both industry and commission staff are agreed on the need to save the industry money, there seems to be disagreement as to how and to what extent performance-based regulation will replace the current regulations on the books.

"Everybody talks about performance-based regulation, including the Commissioners," said David Ward, Chairman of the Advisory Committee on Reactor Safeguards (ACRS), "But it's one of those things that when you say it fast it sounds good, but when you get down to figuring out exactly what it is, it is proven to be very difficult from what I can see."

The Commission staff believe this deregulation would be accomplished by shifting NRC's requirements from regulations to regulatory guides. Many from industry stated that this did not go far enough, that mere shifting of requirements from regulation into regulatory guides would have little impact on the cost of regulation to the nuclear industry.

While, the NRC has long been accused of not regulating the nuclear industry, this Commission seems bent on assuring that no regulator will ever be able to enforce the letter of the law. The shift in requirements may not effect the industry's bottom line but it does effect the enforceability of the Commission's requirements. Regulatory guides are just that, guides. They are not regulations and are not enforceable.

The nuclear industry and the Commission may claim that deregulation will enhance safety, but, what this initiative is really about is saving the nuclear industry money. In a meeting before the Advisory Committee on Reactor Safeguards (ACRS) discussing the elimination of requirements marginal to safety, Mr. William Rasin of the Nuclear Management And Resources Council (NUMARC) stated that this initiative was prompted by the "realization that we are already to a large degree as an industry pretty non-competitive and the situation is getting worse." Mr. Rassin acknowledged that a number of well-run nuclear plant are not competitive within their own utilities and that the nuclear industry must "undertake this activity if we are to remain a competitive and viable industry." (Summary of ACRS 388th Meeting, Regarding Secy-92-263, *Elimination of Requirements Marginal to Safety*, ACRS-R-1479, August 6-8, 1992, pp. 250-253.)

However, Dr. Harold Lewis of the ACRS commented that the profitability of the nuclear industry is not the regulators' primary concern; a point that seems to have been lost on the Commission.

This trend toward deregulation is especially disturbing in light of the fact that many nuclear reactors do not currently meet the NRC requirements for safety. The Commission's desire to reduce the requirements for fire protection under 10 CFR Part 50 appendix R is a perfect example of the NRC attempting to deregulate away a costly problem for the nuclear industry. Seventy-eight operating reactors around the country have installed a fire barrier known as Thermo-lag. Unfortunately, Thermo-Lag doesn't work. In tests where the fire barrier is supposed to last for three hours, Thermo-lag suffered catastrophic failure in an hour and a half. In fire barrier tests of shorter duration Thermo-Lag also experienced catastrophic failure. Not only does Thermo-Lag fail to prevent the spread of fires but it may even be combustible. When the Nuclear Information and Resource Service filed a 2.206 petition on the issue the NRC denied the "show cause" petition even though the question of combustibility of Thermo-Lag remains open. Rather than require the costly corrective action of replacing the fire barrier the NRC is attempting to deregulate away the problem by reducing the requirements of appendix R.

Again, the example presented above indicates the need for the proposed legislation. Providing for judicial review of NRC denials of 2.206 petitions will not turn the Commission into a model regulator. It will merely provide a modicum of accountability to a regulatory body in desperate need of oversight.

NRC LEGISLATIVE PACKAGE

We have reviewed the NRC's legislative proposals, and we have no objections to its contents.

CONCLUSION

The Chairman's bill will be the first step in providing for meaningful public participation in the regulation of this most unforgiving technology. Public Citizen's Critical Mass Energy Project would again like to thank the Chairman and the subcommittee for this opportunity to present our opinions. We look forward to the speedy passage of this important legislation.

QUESTIONS FOR BILL MAGAVERN
DIRECTOR, CRITICAL MASS PROJECT
PUBLIC CITIZEN

1. THE NRC HAS HISTORICALLY PROVIDED FOR A VERY BROAD INTERPRETATION OF INJURY, CONSISTENT WITH JUDICIAL CONCEPTS OF STANDING, IN ITS ADJUDICATORY PROCEEDINGS. SO THAT THE ALREADY STRETCHED RESOURCES OF THE NRC AND THE FEDERAL COURTS WOULD NOT BE OVERWHELMED, HOW WOULD YOU CHANGE THOSE STANDING REQUIREMENTS IN VIEW OF THE TREMENDOUS VOLUME OF ADDITIONAL LITIGATION THE PROPOSED LEGISLATION INVITES?

2. THE COURTS HAVE CONSISTENTLY HELD THAT THE CONSIDERATION, GRANTING AND DENIALS OF SECTION 2.206 PETITIONS FALLS SQUARELY WITHIN THE NRC'S ENFORCEMENT DISCRETION. THEY HAVE ALSO HELD THAT SUCH DECISIONS ARE REVIEWABLE SHOULD THE AGENCY DEFAULT ON ITS RESPONSIBILITY TO CONSIDER A PETITION.

IT IS DIFFICULT TO SEE ANY BENEFIT AND IN FACT A TREMENDOUS DOWNSIDE, IN TERMS OF COST, TO ALLOW JUDICIAL REVIEW FOR THESE TYPES OF PETITIONS. PLEASE TELL THE COMMITTEE HOW THIS PROPOSAL WILL HELP RESOLVE ISSUES RATHER THAN TIE UP RESOURCES IN LITIGATION AND DELAY.

3. WOULD YOU ADVOCATE THIS TYPE OF AUTOMATIC RIGHT OF JUDICIAL REVIEW APPLY TO THE ENFORCEMENT DISCRETION OF ALL FEDERAL AGENCIES AS WELL?

4. IT SEEMS TO ME THAT THE STANDARDS SET OUT IN THE PROPOSED LEGISLATION ARE RATHER VAGUE. THE TERMS "REASONABLY INDICATING", "SIGNIFICANT NONCOMPLIANCE" AND "SUBSTANTIAL HAZARD" SEEM BETTER LEFT TO THE INTERPRETATION OF EXPERTS AT THE NRC RATHER THAN TO LAWYERS AND JUDGES.

HOW IS IT YOU BELIEVE THAT JUDGES ARE BETTER EQUIPPED TO MAKE THOSE DETERMINATIONS THAN THE DIRECTORS OF THE NRC WITH YEARS OF TECHNICAL EXPERTISE AND STAFF RESOURCES? HOW WOULD A REVIEWING COURT BALANCE A PETITIONERS REQUEST AGAINST THE NRC'S BROAD REGULATORY RESPONSIBILITY?

5. HAVE YOU PERFORMED ANY EMPIRICAL STUDIES ON 2.206 PETITION IN THE LAST FIVE YEARS TO DETERMINE HOW MANY OF THEM WOULD MEET THE STANDARDS SET OUT IN THE PROPOSED NEW LEGISLATION. IF SO, WOULD YOU PROVIDE A STUDY FOR THE RECORD.

6. THE STATISTICS SO FAR INDICATE THAT NRC GRANTS A VERY SMALL PERCENTAGE OF 2.206 PETITIONS ON AN ANNUAL BASIS. WHAT WE DON'T KNOW IS THE SUBJECT MATTER OF THE FAILED PETITIONS, SO THAT WE CANNOT EVALUATE WHETHER THIS IS A PROBLEM OF SUCH NATIONAL MAGNITUDE AS TO REQUIRE CONGRESSIONAL ACTION. WHAT INFORMATION DO YOU HAVE, IF ANY, ON THE SUBJECT MATTER OF THE FILED 2.206 PETITIONS FILED WITHIN THE LAST FIVE YEARS?

HOW ELSE CAN WE DETERMINE WHETHER OR NOT THE LACK OF

JUDICIAL REVIEW OF ENFORCEMENT TYPE DECISIONS BY THE NRC
SHOULD BE CONGRESSIONALLY REVERSED?



1993 AUG 19 PM 4: 54

Buyers Up • Congress Watch • Critical Mass • Health Research Group • Litigation Group

Ralph Nader Founder

August 19, 1993

The Hon. Joseph I. Lieberman
The Hon. Alan K. Simpson
Environment and Public Works Committee
Subcommittee on Clean Air and Nuclear Regulation
Washington, D.C. 20510-6175

Dear Senators Lieberman and Simpson:

Enclosed are our answers to the questions you sent us on July 29 for the record of the Subcommittee's June 30, 1993, hearing on issues related to the Nuclear Regulatory Commission.

Sincerely,

Bill Magavern

Director

Critical Mass Energy Project

1. Public Citizen does not advocate a change to NRC standing requirements. The proposed legislation will not open the proverbial flood gates of litigation. In fact, in testimony before the Subcommittee at the June 30 hearing, NRC Chairman Ivan Selin stated that "prior to Heckler v. Chaney fewer than ten cases were brought challenging agency 2.206 decisions, and the NRC enforcement decision was upheld in each of those cases." Chairman Selin testified that enactment of the legislation introduced by Chairman Lieberman and Chairman Baucus would not overwhelm the resources of the NRC. Consequently, we see no need to amend the NRC's standing requirements in response to the proposed legislation.

2. While Chairman Selin has testified that the proposed legislation will not overly burden the NRC, there is anecdotal evidence to suggest that judicial review of Commission denials of 2.206 petitions would have positive policy implications. In 1991 the Nuclear Regulatory Commission testified that it had allowed only two hearings in response to 321 requests under section 2.206 in the more than 10 years that the regulation had been on the books. (Hearings Before the House Subcommittee on Energy and Power, House Committee on Energy and Commerce, 102d Cong., 1st session, May 8, 1991, p. 743 - 744). Both these hearings occurred prior to the decision in Heckler v. Chaney. Thus, rather than result in litigation, the prospect of judicial review may actually encourage the agency to institute a proceeding under 10 CFR 2.202 to resolve the questions raised by the 2.206 petition.

3. Public Citizen believes that judicial review of agency denials of enforcement petitions is warranted where an agency's statute is so antiquated that it fails to provide concerned citizens the opportunity to sue the agency to enforce its own regulation.

As Chairman Lieberman noted at the hearing, many environmental statutes have citizen suit provisions. Citizens suits are now an important part of twelve environmental statutes, including the Clean Air Act, yet the Atomic Energy Act fails to provide for such suits. Judicial review of enforcement discretion is particularly important for nuclear regulation because citizens have no other legal recourse but the 2.206 petition. If the Senate would prefer adding a citizen suit provision to the Atomic Energy Act rather than the judicial review proposed by Chairman Lieberman, we would support that substitution.

4. Rather than setting vague standards, the legislative language cited in your question includes terms of art used throughout nuclear regulation including the Atomic Energy Act of 1954, Energy Reorganization Act of 1974 and the Commission's new reactor licensing regulations in 10 CFR Part 52.

The NRC itself acknowledges that there are times when judicial review of the

agency is appropriate. The NRC provides for judicial review of 2.206 petitions arising out of a Part 52 licensing proceeding. Why should 2.206 petitions which are filed prior to reactor criticality be reviewable and those which are filed once the reactor is running be exempted from review? The public's interest in the safety of a reactor is no less deserving of judicial review after a reactor is operating. Basically, those who file 2.206 petitions prior to operation and those who use the regulation after a reactor has been licensed are asking for the same thing. Since under the new "one-step" licensing scheme combined licenses will be issued prior to construction, both petitioners would be requesting action upon a license which has already been granted.

5 & 6. Public Citizen has provided a copy of a report by Diane Curran, an attorney with the firm of Harmon, Curran, Gallagher & Spielberg, entitled The Public as Enemy: NRC Assaults on Public Participation in the Regulation of Operating Nuclear Power Plants, conducted for the Union of Concerned Scientists in April 1992.

103D CONGRESS
1ST SESSION

S. 1162

To authorize appropriations for the Nuclear Regulatory Commission for fiscal years 1994 and 1995, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 24 (legislative day, JUNE 22), 1993

Mr. BAUCUS (for himself, Mr. LIEBERMAN, and Mr. SIMPSON) (by request) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To authorize appropriations for the Nuclear Regulatory Commission for fiscal years 1994 and 1995, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Nuclear Regulatory
5 Commission Authorization Act for fiscal years 1994 and
6 1995”.

1 **SEC. 2. AUTHORIZATION OF APPROPRIATIONS FOR FISCAL**
2 **YEARS 1994 AND 1995.**

3 (a) **SALARIES AND EXPENSES.**—There are hereby au-
4 thorized to be appropriated to the Nuclear Regulatory
5 Commission in accordance with the provisions of section
6 261 of the Atomic Energy Act of 1954 (42 U.S.C. 2017)
7 and section 305 of the Energy Reorganization Act of 1974
8 (42 U.S.C. 5875), \$542,900,000 for fiscal year 1994 to
9 remain available until expended, of which \$22,000,000
10 shall be authorized from the Nuclear Waste Fund; and,
11 \$546,800,000 for fiscal year 1995 to remain available
12 until expended, of which \$22,000,000 shall be authorized
13 from the Nuclear Waste Fund.

14 (b) **OFFICE OF THE INSPECTOR GENERAL.**—There
15 are hereby authorized to be appropriated to the Nuclear
16 Regulatory Commission's Office of the Inspector General
17 in accordance with the provisions of section 108 of the
18 Inspector General Act Amendments of 1988 (31 U.S.C.
19 1105(a)(25)) \$4,800,000 for fiscal year 1994 to remain
20 available until expended, and \$5,000,000 for fiscal year
21 1995 to remain available until expended.

22 **SEC. 3. ALLOCATION OF AMOUNTS AUTHORIZED.**

23 (A) **IN GENERAL.**—The sums authorized to be appro-
24 priated under section (2)(a) for fiscal years 1994 and
25 1995 shall be allocated as follows:

3

1 (1) not more than \$163,807,000 for fiscal year
2 1994 and not more than \$168,005,000 for fiscal
3 year 1995 may be used for "Reactor Safety and
4 Safeguards Regulation";

5 (2) not more than \$99,969,000 for fiscal year
6 1994 and not more than \$98,339,000 for fiscal year
7 1995 may be used for "Reactor Safety Research";

8 (3) not more than \$31,000,000 for fiscal year
9 1994 and not more than \$31,369,000 for fiscal year
10 1995 may be used for "Reactor Special and Inde-
11 pendent Reviews, Investigations and Enforcement";
12 and

13 (4) not more than \$61,880,000 for fiscal year
14 1994 and not more than \$63,025,000 for fiscal year
15 1995 may be used for "Nuclear Material and Low-
16 Level Waste Safety and Safeguards Regulation";

17 (5) not more than \$22,000,000 for fiscal year
18 1994 and not more than \$22,000,000 for fiscal year
19 1995 (from the Nuclear Waste Fund) may be used
20 for "High-Level Nuclear Waste Regulation";

21 (6) not more than \$164,244,000 for fiscal year
22 1994 and not more than \$164,062,000 for fiscal
23 year 1995 may be used for "Nuclear Safety Manage-
24 ment and Support".

1 (b) **LIMITATIONS.**—The Nuclear Regulatory Commis-
2 sion may use not more than 1 per centum of the amounts
3 allocated under section (2)(a) to exercise its authority
4 under section 31 a. of the Atomic Energy Act of 1954
5 (42 U.S.C. 2051(a)) to enter into grants and cooperative
6 agreements with organizations such as universities, State
7 and local governments, and not-for-profit institutions.
8 Grants made by the Commission shall be made in accord-
9 ance with chapter 63 of title 31 United States Code and
10 other applicable law.

11 (c) **REALLOCATION.**—Except as specified below, any
12 amounts allocated for a fiscal year to the Nuclear Regu-
13 latory Commission pursuant to any paragraph of section
14 (2)(a) for purposes of the program referred to in such
15 paragraph, may be reallocated by the Commission for use
16 in a program referred to in any other paragraph of such
17 section, or for use in any other activity within a program,
18 except that the amount available from appropriations for
19 such fiscal year for use in any program or specified activ-
20 ity may not, as a result of reallocations made under this
21 section, be increased or reduced by more than \$500,000
22 unless the Committee on Energy and Commerce and the
23 Committee on Natural Resources of the House of Rep-
24 resentatives and the Committee on Environment and Pub-
25 lic Works of the Senate are notified in advance by the

1 Commission. Such notification will contain a full and com-
2 plete statement of the reallocation to be made and the
3 facts and circumstances relied upon in support of such
4 reallocation. Funds authorized to be appropriated from
5 the Nuclear Waste Fund may be used only for the Com-
6 mission's high-level nuclear waste activities and may not
7 be reprogrammed for other Commission activities.

8 **SEC. 4. RETENTION OF FUNDS.**

9 Money received by the Nuclear Regulatory Commis-
10 sion for the cooperative nuclear safety research program,
11 services rendered to foreign governments and international
12 organizations, and the material and information access au-
13 thorization programs (including criminal history checks
14 under section 149 of the Atomic Energy Act of 1954 (42
15 U.S.C. 2169)) may be retained and used, subject to appro-
16 priations, for salaries and expenses associated with those
17 activities, notwithstanding the provisions of section 3302
18 of title 31, United States Code, and shall remain available
19 until expended.

20 **SEC. 5. TRANSFER OF CERTAIN FUNDS.**

21 From amounts appropriated to the Nuclear Regu-
22 latory Commission pursuant to section (2)(a) of this Act,
23 except for appropriations from the Nuclear Waste Fund,
24 the Commission may transfer sums to its Office of the
25 Inspector General: *Provided*, That the total transfer dur-

1 ing any fiscal year may not exceed 5 percent of the amount
2 authorized under section (2)(b) of this Act for that fiscal
3 year.

4 **SEC. 6. LIMITATION.**

5 Notwithstanding any other provisions of this Act, no
6 authority to make payments under this Act shall be effec-
7 tive except to such extent or in such amounts as are pro-
8 vided in advance in appropriations Acts.

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103D CONGRESS
1ST SESSION

S. 1165

To provide for judicial review of Nuclear Regulatory Commission decisions on petitions for enforcement actions, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 25 (legislative day, JUNE 22), 1993

Mr. LIEBERMAN (for himself and Mr. BAUCUS) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To provide for judicial review of Nuclear Regulatory Commission decisions on petitions for enforcement actions, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be referred to as the “Nuclear Enforce-
5 ment Accountability Act of 1993”.

6 **SEC. 2. ENFORCEMENT PETITIONS AND JUDICIAL REVIEW.**

7 Section 189 of the Atomic Energy Act of 1954 (42
8 U.S.C. 2239) is amended by adding at the end the follow-
9 ing new subsection:

1 “d. ENFORCEMENT PETITIONS.—

2 “(1) IN GENERAL.—Any person may petition
3 the Nuclear Regulatory Commission to institute a
4 proceeding to modify, suspend, or revoke a license,
5 or for such other action as may be proper.

6 “(2) STANDARDS FOR GRANTING.—The Com-
7 mission shall grant any request under paragraph (1)
8 if the petitioner demonstrates material evidence rea-
9 sonably indicating that—

10 “(i) the holder of the license with respect
11 to which a request has been made under para-
12 graph (1) is in significant noncompliance with
13 the terms of the license, this chapter, or the
14 Commission’s regulations, or

15 “(ii) the activities of the license present a
16 substantial hazard to the public health and
17 safety or common defense and security.

18 “(3) JUDICIAL REVIEW.—Any Commission
19 order denying a request under this subsection shall
20 be subject to judicial review in accordance with
21 chapter 158 of title 28, United States Code, and
22 chapter 7 of title 5, United States Code.”.

103D CONGRESS
1ST SESSION

S. 1166

To amend the Energy Reorganization Act of 1974 and the Atomic Energy Act of 1954 to enhance the safety and security of nuclear power facilities, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 25 (legislative day, JUNE 22), 1993

Mr. BAUCUS (for himself, Mr. LIEBERMAN, and Mr. SIMPSON) (by request) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To amend the Energy Reorganization Act of 1974 and the Atomic Energy Act of 1954 to enhance the safety and security of nuclear power facilities, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Omnibus Nuclear
5 Power Safety and Security Enhancement Act of 1993”.

6 **SEC. 2. NOTIFICATION REQUIREMENTS.**

7 Section 206 of the Energy Reorganization Act of
8 1974 is amended to read as follows:

2

1 "NONCOMPLIANCE

2 "SEC. 206. (a) Any person constructing owning, op-
3 erating, or supplying a component of any facility or activ-
4 ity which is licensed or otherwise regulated by the Com-
5 mission pursuant to the Atomic Energy Act of 1954 (in-
6 cluding any facility leased by the United States Enrich-
7 ment Corporation), or pursuant to this Act, who obtains
8 information reasonably indicating that such facility or ac-
9 tivity or a basic component supplied to such facility or
10 activity—

11 "(1) contains a defect, or

12 "(2) fails to comply with the Atomic Energy
13 Act of 1954 or any applicable rule, regulation, order,
14 or license of the Commission,

15 shall immediately notify the Commission of such defect or
16 failure to comply if such defect or failure to comply could
17 create a substantial safety hazard as defined by the regu-
18 lations promulgated by the Commission, unless such per-
19 son has actual knowledge that the Commission has been
20 informed in writing of such defect or failure to comply.

21 "(b) The Commission may issue such regulations and
22 orders as it deems necessary to ensure compliance with
23 this section, including regulations and orders requiring
24 any person subject to this section to devise and implement
25 procedures to identify, evaluate, and report defects and

3

1 failures to comply subject to the notification requirements
2 of subsection (a).

3 “(c) Any person who fails to provide a notification
4 required by subsection (a), or who violates any regulation
5 or order issued under subsection (b), shall be subject to
6 a civil penalty in the same manner and amount as pro-
7 vided for violations subject to a civil penalty under section
8 234 of the Atomic Energy Act of 1954; except that an
9 individual who is subject to the requirements of this sec-
10 tion solely because of employment by a person subject to
11 those requirements shall only be assessed a civil penalty
12 for failure to provide notice pursuant to subsection (a) if
13 such individual has actual knowledge of the reporting re-
14 quirement imposed by subsection (a) and of a defect as
15 provided in subsection (a)(1) or of a failure of compliance
16 as provided in subsection (a)(2).

17 “(d) The requirements of this section shall be pre-
18 eminently posted on the business premises of any person
19 who is required to notify the Commission of a defect or
20 failure to comply under subsection (a).

21 “(e) The Commission may conduct such reasonable
22 inspections, investigations, and other enforcement activi-
23 ties as it deems necessary to ensure compliance with the
24 provisions of this section and with any regulations and or-
25 ders issued thereunder.

1 “(f) For purposes of this section, the term ‘person’
2 has the same meaning as in subsection 11 s. of the Atomic
3 Energy Act of 1954, except that (A) it also includes the
4 Department of Energy with respect to facilities of the De-
5 partment regulated by the Commission and with respect
6 to any item provided by the Department as a component
7 to a licensee, and (B) it does not include an individual
8 unless he or she is (i) a sole proprietor or partner of a
9 business that constructs, owns, operates, or supplies a
10 component covered by subsection (a) of this section, or
11 (ii) a director or responsible officer employed by a person
12 subject to that subsection.

13 “(g) This section shall apply to the United States En-
14 richment Corporation and facilities leased by the Corpora-
15 tion, and to its directors and officers, to the same extent
16 as any other person subject to this section.”.

17 **SEC. 3. CIVIL MONETARY PENALTIES FOR VIOLATIONS OF**
18 **RULES, REGULATIONS, ORDERS OR LICENS-**
19 **ING REQUIREMENTS.**

20 (a) The heading of section 234 of the Atomic Energy
21 Act of 1954 is amended to read as follows: “**CIVIL MONE-**
22 **TARY PENALTIES FOR VIOLATIONS OF RULES, REG-**
23 **ULATIONS, ORDERS, OR LICENSING REQUIRE-**
24 **MENTS.**”.

1 (b) The first sentence of subsection a. of section 234
2 of the Atomic Energy Act of 1954 is amended to read
3 as follows:

4 "a. Any person who—

5 "(1) violates (A) any licensing provision of sec-
6 tion 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or
7 109, or any rule, regulation, or order issued there-
8 under, (B) the certification provisions of section
9 1701, or any rule or regulation issued thereunder,
10 (C) any term, condition, or limitation of any license
11 or certification issued under any of these sections, or
12 (D) any rule, regulation, or order issued under sec-
13 tion 161 b., 161 i., or 161 o., or

14 "(2) commits any violation for which a license
15 may be revoked under section 186,
16 shall be subject to a civil penalty, to be imposed by the
17 Commission, of not to exceed \$100,000 for each such vio-
18 lation."

19 **SEC. 4. ADVISORY COMMITTEE ON REACTOR SAFEGUARDS.**

20 Section 29 of the Atomic Energy Act of 1954 is
21 amended by deleting the last two sentences of that section.

22 **SEC. 5. CARRYING OF FIREARMS BY LICENSEE EMPLOY-**
23 **EES.**

24 Section 161 k. of the Atomic Energy Act is
25 amended—

6

1 (1) by inserting “and licensees (including em-
2 ployees of contractors of licensees)” after “(at any
3 tier)”,

4 (2) by striking “owned by or contracted to the
5 United States or being transported to or from such
6 facilities” and inserting “owned by or contracted to
7 the United States or licensed by the Commission, or
8 being transported to or from such facilities,”

9 (3) by inserting “or a license of the Commis-
10 sion” after “or a contractor of the Department of
11 Energy or Nuclear Regulatory Commission”, and

12 (4) by inserting “and the Commission” after
13 “The Secretary”.

14 **SEC. 6. UNAUTHORIZED INTRODUCTION OF DANGEROUS**
15 **WEAPONS.**

16 Section 229 a. of the Atomic Energy Act of 1954 is
17 amended by adding after “custody of the Commission” the
18 words “or subject to its licensing authority under this Act
19 or any other Act”.

20 **SEC. 7. SABOTAGE OF PRODUCTION, UTILIZATION, OR**
21 **WASTE STORAGE FACILITIES UNDER CON-**
22 **STRUCTION.**

23 Section 236 a. of the Atomic Energy Act of 1954 is
24 amended to read as follows:



1 “a. Any person who intentionally and willfully de-
2 stroy or causes physical damage to, or who intentionally
3 and willfully attempts to destroy or cause physical damage
4 to—

5 “(1) any production facility or utilization facil-
6 ity licensed under this Act;

7 “(2) any nuclear waste storage facility licensed
8 under this Act;

9 “(3) any production, utilization, or waste stor-
10 age facility subject to licensing under this Act dur-
11 ing its construction where the destruction or damage
12 caused or attempted to be caused could affect public
13 health and safety during the operation of the facil-
14 ity; or

15 “(4) any nuclear fuel for a utilization facility li-
16 censed under this Act, or any spent nuclear fuel
17 from such a facility;

18 shall be fined not more than \$10,000 or imprisoned for
19 not more than ten years of both.”.

20 **SEC. 8. ADMINISTRATIVE SEARCH WARRANTS.**

21 Section 161 c. of the Atomic Energy Act of 1954 is
22 amended to read as follows:

23 “(1) make such studies and investigations, ob-
24 tain such information, and hold such meetings or
25 hearings as the Commission may deem necessary or

8

1 proper to assist it in exercising any authority pro-
2 vided in this Act, or in the administration or en-
3 forcement of this Act, or any regulations or orders
4 issued thereunder. For such purposes the Commis-
5 sion is authorized—

6 “(A) to administer oaths and affirmations;

7 “(B) by subpoena, to require any person to
8 appear and testify or appear and produce docu-
9 ments, or both, at any designated place;

10 “(C) to conduct searches without a war-
11 rant of the premises of applicants, licensees,
12 and other persons subject to section 206 of the
13 Energy Reorganization Act of 1974; and

14 “(D) by judicially-approved, administrative
15 search warrant, to enter at reasonable times
16 premises under the control of any person not
17 covered by subparagraph (C) who is subject to
18 the Commission’s jurisdiction.

19 “(2) Before a warrant is issued pursuant to
20 subparagraph (D) of paragraph (1), the Commission
21 must establish that it has a reasonable suspicion
22 that a violation of a Federal statute or a Commis-
23 sion regulatory requirement has been or will be com-
24 mitted. A search pursuant to such a warrant shall
25 be effected only for purposes directly related to the

1 basis for the warrant, and each such search shall be
2 commenced and completed with reasonable prompt-
3 ness.

4 “(3) Witnesses subpoenaed pursuant to sub-
5 paragraph (B) of paragraph (1) shall be paid the
6 same fees and mileage as are paid witnesses in the
7 district courts of the United States.”.

8 **SEC. 9. AMENDMENTS TO TABLE OF CONTENTS.**

9 The Table of Contents of the Atomic Energy Act of
10 1954 is amended by striking “Sec. 234. Civil Monetary
11 Penalties for Violations of Licensing Requirements” and
12 inserting in lieu thereof “Sec. 234. Civil Monetary Pen-
13 alties for Violations of Rules, Regulations, Orders, or Li-
14 censing Requirements”.

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